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PC GRAPHICS & VIDEO

MAY 1998

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REVIEWS

- formZ
- Renderzone 2.9.5
- Deneba Canvas 5
- QuarkXpress 4.0

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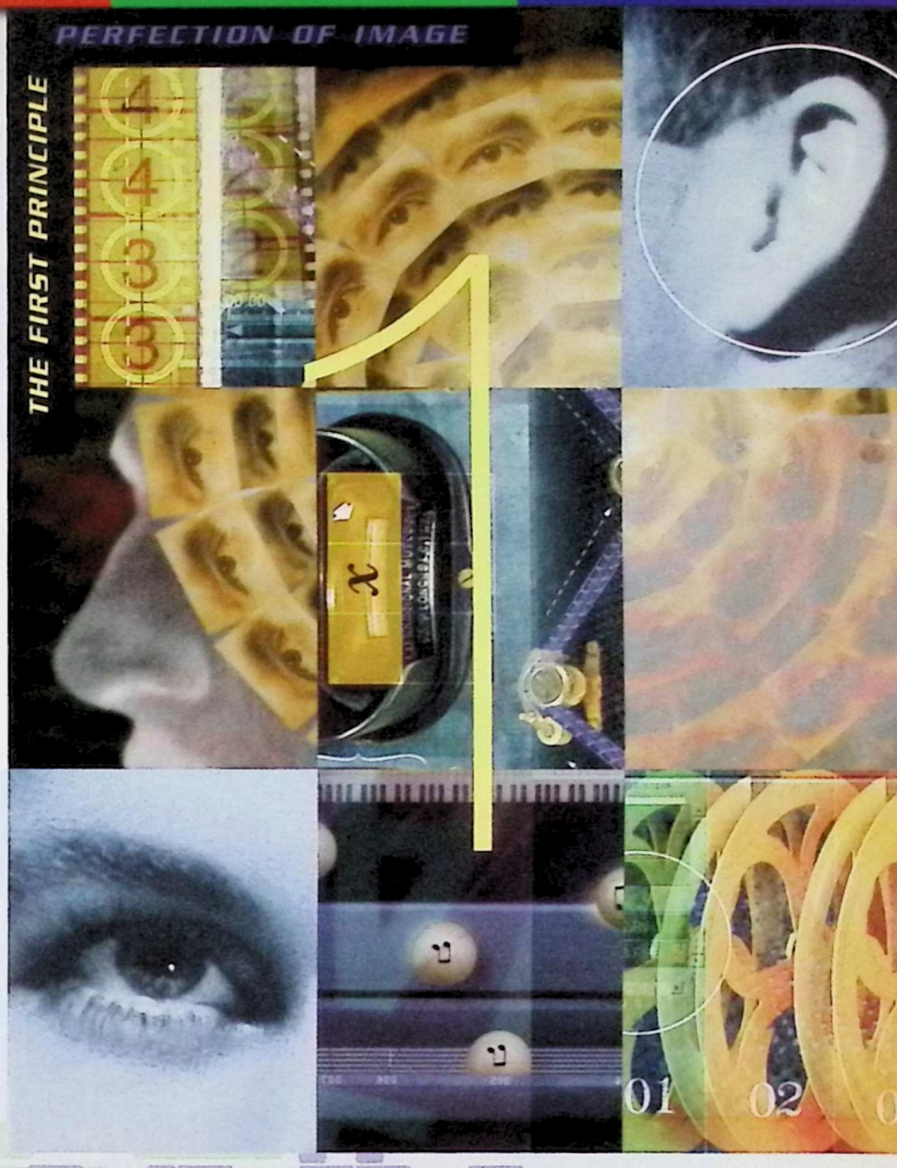

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www.pcgv.com

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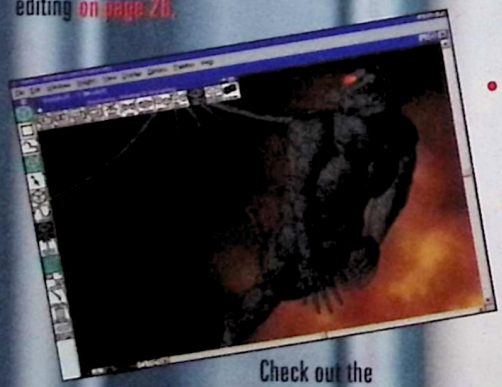

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Cover: Created by Art Director Donna Pribyl in Photoshop 4.0, and Illustrator 7.0, using various Photoshop filters and multiple plug-in filters; such as Alien Skin's Eye Candy, and Kai's Power Tools. The image was created on a 133 MHz Pentium, with 64MB RAM, and a 2GB hard drive.

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PC GRAPHICS & VIDEO

EDITORIAL

Rising Standards

It's a rare standards battle: Apple's cross-platform QuickTime 3 and the new Microsoft multimedia formats can actually coexist.

Do we have a new multimedia standards battle brewing? The aging AVI and WAV file formats are finally being addressed (hooray!) by Microsoft in future formats called ASF and AAF. But, in the meantime, Apple released QuickTime 3 (free from www.apple.com/quicktime) and QuickTime Pro ($29.95). Version 3 of the popular QuickTime format is the first to be available for more than playback on the Windows platform.

One thing we don't know is how competitive QuickTime and ASF/AAF will be with each other, a factor that could diminish their advantages as standards. Or will they coexist?

QuickTime 3 is designed for capture, edit, and playback of more than 30 digital video and audio file formats. These include formats for video, still image, audio, animation, and MIDI.

QuickTime 3 Pro features full screen video playback, digital video and audio editing with cut and paste, and preparation and compression of content for streaming delivery from any Web server.

QuickTime 3 began shipping March 30, which gives it a big head start over Microsoft's ASF.

Billed as the successor to the AVI file format for Windows, ASF version 1.0 will be supported in Windows 98; updates to Windows 98 and Windows NT 5.0 will be provided for version 2.0.

Microsoft bills ASF as an open industry-developed format "specifically tuned for streaming media distribution." A higher end companion, the Advanced Authoring Format (AAF), is being developed with a coalition of companies, including Adobe, Avid, Matrox, Digidesign, Pinnacle Systems, Sonic Foundry, Truevision, and Softimage.

AAF is designed for "exchange of rich media among digital production tools and content creation applications." The format licenses Avid's Open Media Framework interchange (OMFI) technology and uses Microsoft's Structured Storage open container format.

It, too, will be available in future versions of Windows; an SDK will be out this fall.

Either way this plays out in the market, users win. Unlike the typical competition between standards in our business, Apple's and Microsoft's solutions are able to work with each other. Plus, each has capabilities the other lacks.

The cross-platform nature of QuickTime, with its seamless exchange between Macs and PCs, has huge advantages. And, as Microsoft points out, when the AVI format was introduced in 1990, the use of PCs for professional media authoring and Internet applications was not widespread. It's about time for something new!

Frank Moldstad

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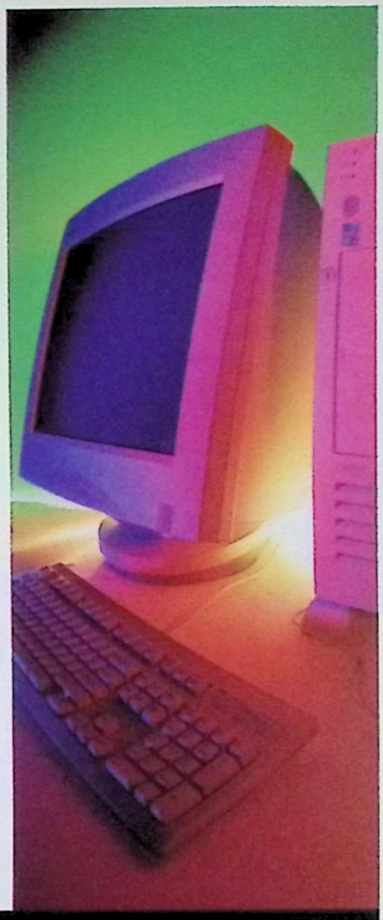

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PUBLISHER'S NOTE

The Art of Publishing

The idea of publishing has taken on an expanded meaning.

Last month at the National Association of Broadcasters convention in Las Vegas, I ran into an old acquaintance. That's not too unusual, as industry tradeshows sometimes seem like family reunions. In this case it was someone who in the late 80s had decided to work as a desktop publisher.

At that time he created a variety of print media—business cards, menus, flyers, newsletters—whatever could be done with a Mac and a laser printer. For awhile he made a good living, but after a couple of years the business became too crowded. He took a staff position at a publishing company, trading his independence for a steady paycheck.

But times have changed once again. Here he was at NAB, looking for the latest tools for video and graphics. In the last five years he had been using computers for editing video. Now he was looking at the latest digital editors with an eye toward creating interactive media for the Web.

Interestingly, he still considers himself a desktop publisher.

It made me start thinking about what can be created with today's desktop tools. Obviously, one can create outstanding printed media. But just as the technology has expanded our capabilities, the idea of publishing has taken on an expanded meaning.

Wedding and other event videographers are a good example of this. Armed with a digital camcorder, a fast computer, and software, they will produce a VHS tape documenting your special events. It really isn't all that different from the original desktop publishing paradigm, is it? Substitute a scanner for the camcorder and a laser printer for the VHS recorder, and you can see how simple a transition it is from one medium to another.

3D animation is one of the biggest growth areas in the graphics industry. While some of that growth is without doubt in the film, broadcast, and entertainment arenas, these industries don't account for the huge installed base of animation software. Animation is being created by and for lawyers, doctors, and educators. It's being created for use on Web pages. And all of that creation is done using computers.

And then we come to the Web. It's here it all comes together. Layout software offers all the features used for print, yet supports the dynamic needs of the Web. Animation is everywhere. Audio permeates the Internet. And of course there's video.

The whole concept of publishing has changed as the world moved to the digital nature of bits and bytes. Regardless of its format, whenever you create content for distribution you are a publisher. Desktop publishing isn't just about making newsletters anymore. It's the way content is created for the business community.

Be seeing you
Lou Wallace

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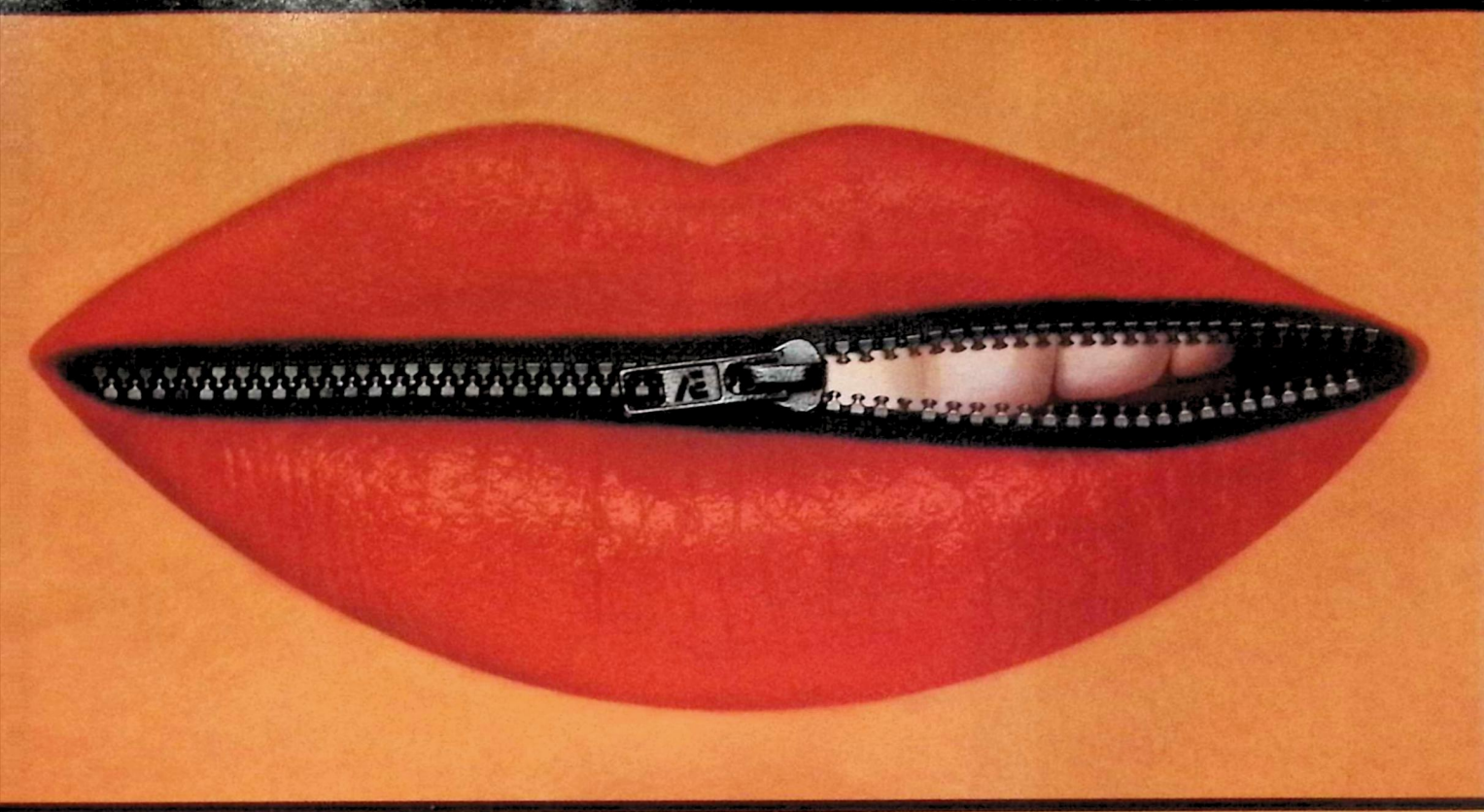

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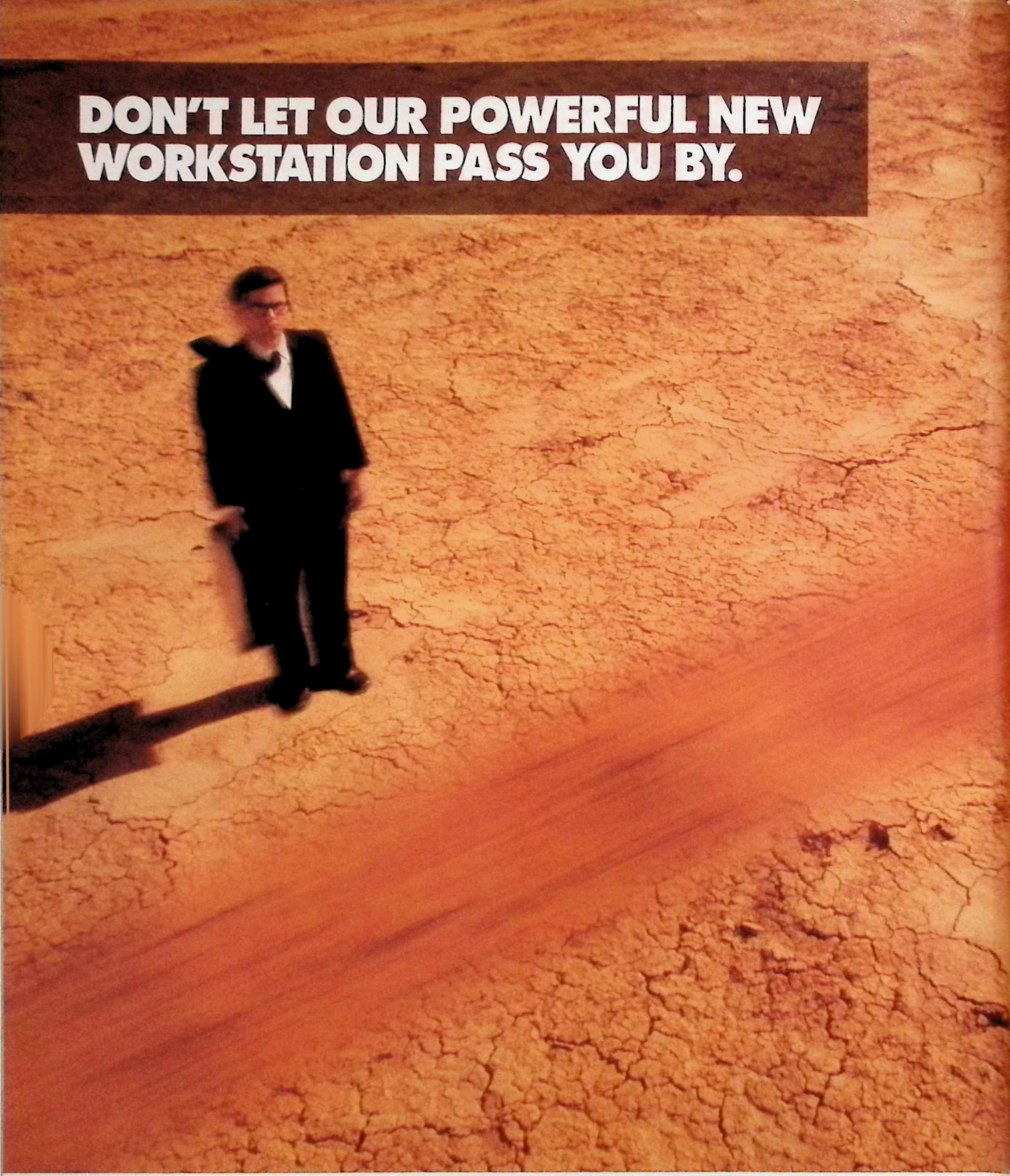

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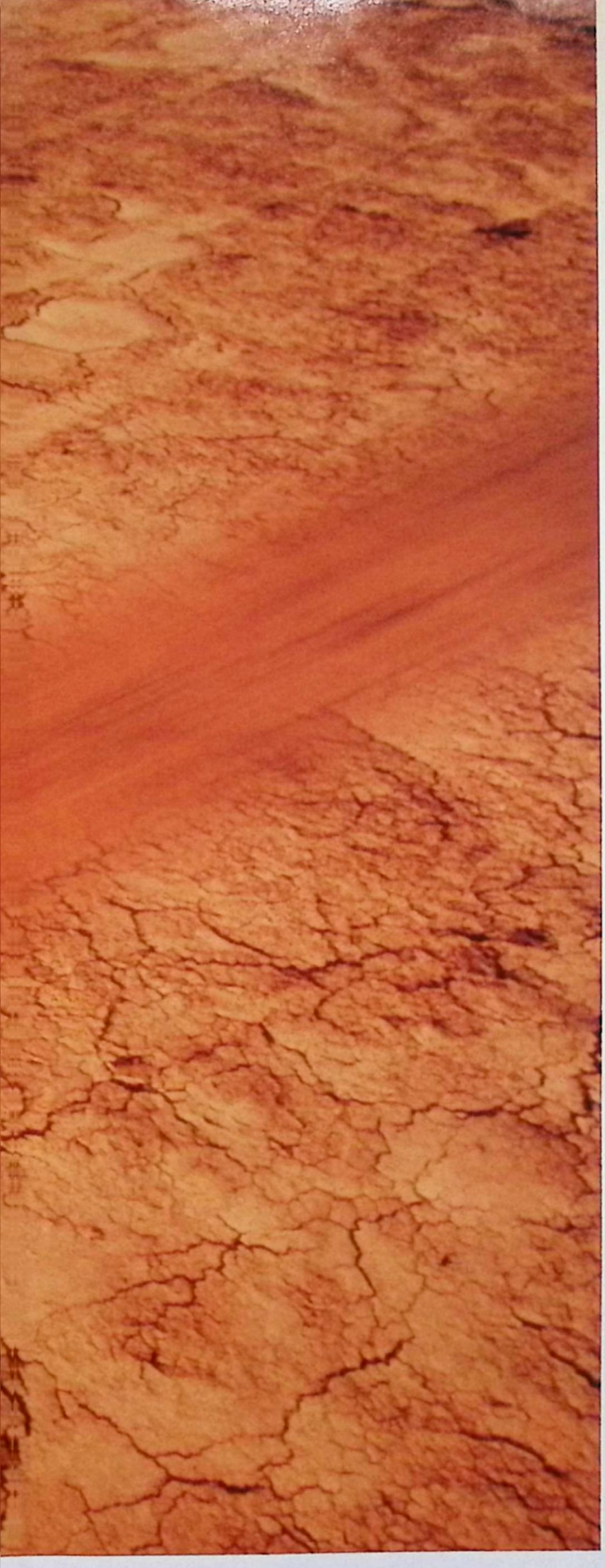

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2D ON THE CUTTING EDGE

As a commercial photographer who now spends 80 percent of the time on the computer and only 20 percent behind the camera, I am always trying to stay as close to the cutting edge as sound business economics will allow. I cannot justify the cost of a pre-assembled dual Pentium machine, but would like both to benefit from and upgrade in that direction.

I have purchased a Tyan Thunder2 motherboard, a single 300MHz Pentium II, and a single 128MB SDRAM chip. Although I am running 128MB to edit photos ranging from 20 to 80MB, I can up the RAM to 512MB in steps. Additionally, I plan to add a second 300MHz Pentium II when I move to NT 5.0. I also plan to add a fast AV SCSI hard drive at a later date.

My question is related to video upgrades. I do only 2D work. I have an OEM Millennium PCI card with 4MB. I run a 17-inch monitor at 24-bit 768 x 1024 resolution. The hot machines all have OpenGL cards with 8MB or 16MB on-card memory. My board has an AGP slot for some of these new cards. But I don't do 3D. Can you recommend a suitable upgrade path for the work I do?

John Lacy
JLacyPhoto@aol.com

You have a pretty powerful system as it is, running 24-bit with a fast processor. Perhaps you could enhance your work by adding another 4MB to your Millennium, if possible, and upping the physical RAM for faster performance. You also can go with the Millennium II with 8MB. Both cards are excellent for 2D work. Both of our art directors have Millennium cards in their systems.

OpenGL is for 3D animators and AGP in its current implementation doesn't really garner any significant speed advantages (though the second implementation, AGP Pro, is supposed to, largely for 3D and game playing, not 2D).

The Editors

SEEING GREEN

I was disappointed to see no original version of the photo on pages 42 and 43 (March "Buyer's Guide") for comparison with the test prints. Don't you think that it would have been more useful to include a standard for comparison than to show the results of using cheap paper?

Nevertheless, some differences are clearly evident. Without having read all the text yet, I think I can pick out printer No. 6 as the best of the bunch, except for the rather obvious banding in the grayscale photo. But amazingly, it's the only one from this crop of "photo-quality" printers that didn't turn the little girl's hair green (or not as green, anyway). Did the others really look so green? Was this greenish cast possibly introduced in your printing process?

With regards to the banding, it looks like it's condensed compared to the banding I see in my ESC 800. Did you reduce the output of the printers? That would be a mistake.

David Salahi
dsalahi@dnai.com

The greenish cast was indeed introduced in the printing process—one of the unavoidable pitfalls of mass printing. That very problem is why we decided to make sure that all the print samples were affected equally. At full size, the images would not have all fit on a spread layout. Ink treatments vary from page to page, so we decided that because the comparisons were the key to the images, it would be better to condense the samples rather than split them up.

You're probably right, an original of the images would have been a better choice. We planned on both but ended up cutting the original for space reasons.

J.V. Bolkan

TOOLS OF THE TRADE

The following products are used in the production of *PC Graphics & Video* magazine. All editorial content and images are created, edited, and made ready for printing on PC-compatible machines.

EDITORIAL HARDWARE:

Intergraph 300MHz Pentiums with 64MB RAM, Matrox Millennium II graphics adapters, Intergraph 17-inch monitors, Ensoniq audio boards, 24X CD-ROM drives, SupraExpress 336i SP modems.

PRODUCTION HARDWARE:

Intergraph TD-3 100MHz Pentium workstations with 64MB RAM, 21-inch monitors, 4X CD-ROM drives, and 1GB hard disks; an Intergraph TD-4 dual 100MHz Pentium system with 164MB RAM. Other systems include 66MHz Intel 486 clones with 64MB RAM, #9GXE graphics adapters, ViewSonic PT813 21-inch monitors, Philips CDD 2000 CD Writer, MicroNet 200MB SyQuest drives, SyJet 1.5GB drive, and an Iomega Zip Drive.

SOFTWARE:

QuarkXPress 3.32 for Windows, Microsoft Windows 95, and Office 6.0, Corel CorelDRAW 5.0, MetaCreations Kai's Power Tools 3.0, Optima Technology XChange for Windows, Adobe Illustrator 7.0 and Photoshop 4.0. In the course of a typical production, editors and artists will test and use a variety of other software and hardware.

HOW TO REACH US

We want to hear from you! Write to us at *PC Graphics & Video* through the following email addresses.

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Donna Pribyl: dpribyl@pcgv.com
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Circle 6 Web # 207

NEWSLINE

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- Play, Inc. merges with Electric Image
- Desktop video products debut at NAB
- Adobe updates its professional graphics products
- Iterated Systems pushes STiNG Technology

MAY 1998

NAB BITS, BYTES, AND INFORMATION

- MPEG-2 encoding/decoding was attracting lots of attention. Several products were introduced, including STB's (www.stb.com) Quartet GL, a four-port MPEG-2 adapter with genlock that can receive, decompress, and display up to four independent channels of MPEG-2 data simultaneously.

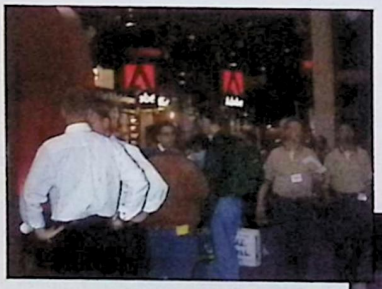
  The RealMagic NetStream2 card from Sigma Designs (www.sigmadesigns.com), designed especially for MPEG-1 and MPEG-2 playback on corporate networks, supports DirectShow and ActiveMovie as well as local, DVD-ROM, and streaming playback in 24-bit color.
- C-Cube Microsystems (www.c-cube.com) showcased DV-xpress, a single chip MPEG-2 encoder/decoder. The technology will have Frame-Accurate MPEG Editing, or FAME, which offers full control over each frame of MPEG video. Companies that have ex-pressed support for the technology include Pinnacle Systems and FAST Multimedia.
- DVD was another buzzword at the show as several companies showed off DVD authoring solutions.

NAB KICKS-OFF IN LAS VEGAS

Many Digital Content Creation Solutions Abound at Show

NAB98 kicked off with a surprise announcement by Play, Inc. that it has merged with Electric Image.

The alliance will result in the integration of Electric Image's Mac-based 3D animation and rendering software with Play's long-awaited PC-based Trinity system. The D1-quality, real-time video, graphics, and post-production system shipped its first units in March.



"Basically what this means is greater resources and faster development of Electric Image products, which is what users really want," spokeswoman Karen Raz said.

The software, ElectricImage, has been used in such projects as *The Mask* and "The X-Files," and on several Nintendo 64 and Sony PlayStation games. Raz said the application will continue to be called ElectricImage.

In other NAB news, Chyron (www.chyron.com) demonstrated a special effects and video compositing program for the desktop video editing market. Called Concerto, the program runs on Windows 95/NT and supports unlimited layers of audio and video using a timeline interface with a proxy system that enables users to work with smaller images prior to rendering, the company said.

Concerto also works with third-party plug-ins for Adobe Premiere and Photoshop and in:sync's Speed Razor.

NewTek Systems (www.newtek.com) debuted Aura, a production tool for broadcast and multimedia that offers animation, video, paint, and layering capabilities. It combines paint tools with compositing, cel animation, 2D animation, special effects, and character generation.

Top left: Adobe showed Premiere 5.0. Above: Iomega's booth was BUZzing with attendees interested in its BUZ video capture device.

Another special effects tool was introduced by DigiEffects (www.digieffects.com): CineLook for Windows NT, a plug-in for Adobe After Effects that gives video clips film-quality appeal. The image-enhancing features developed by the company includes StockMatch, ChromaMatch, and Film Damage.

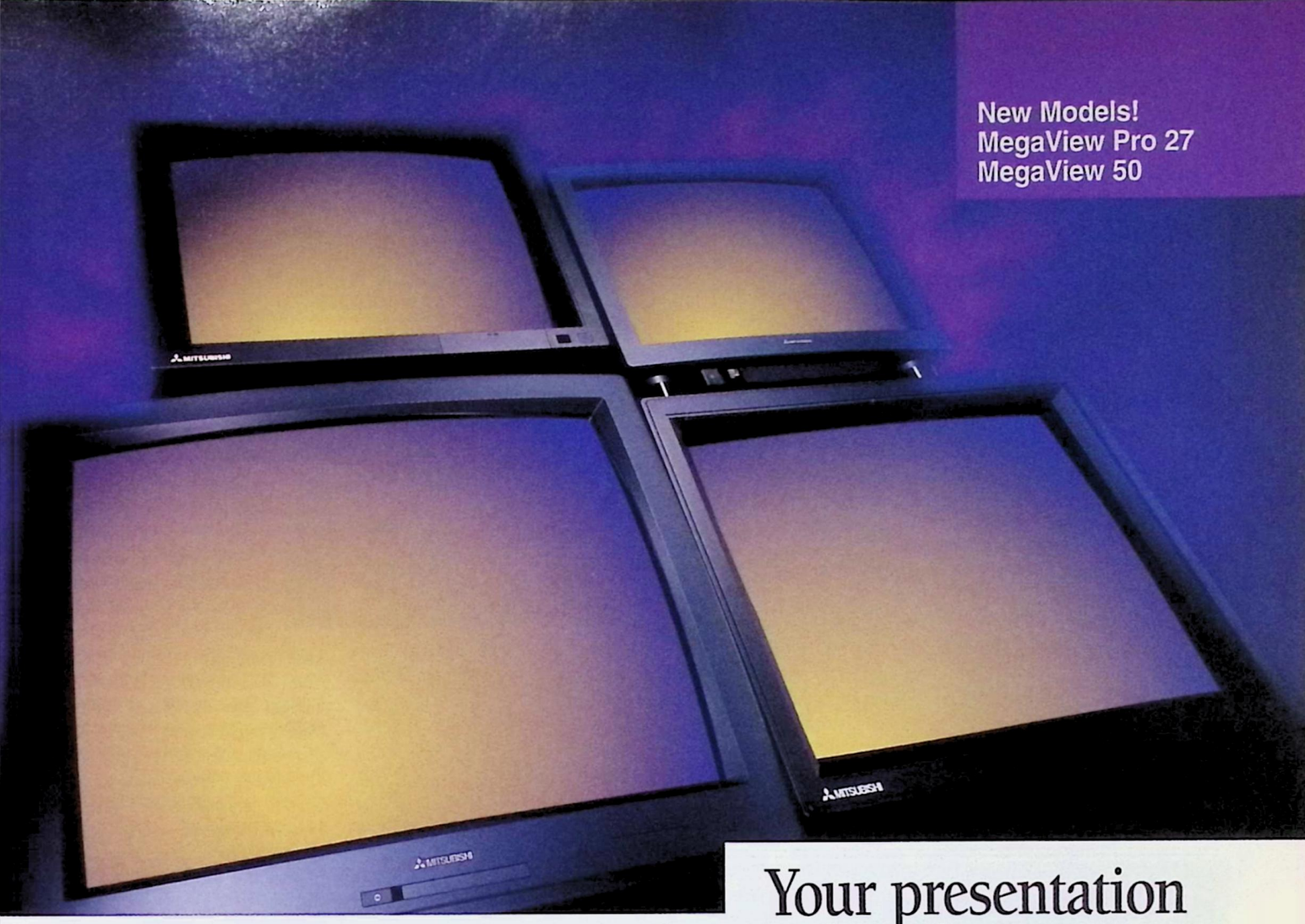
On the hardware front, Canopus Corp. (www.canopuscorp.com) debuted TotalRex, a non-linear video accelerator that offers networking capabilities and M-JPEG and DV preview and rendering acceleration.

It is designed to offer networked video editing of M-JPEG and DV capture and editing solutions from companies including Canopus, DPS, FAST, Pinnacle Systems, and Truevision, offering 25 percent faster rendering times and high-speed preview from the hard disk, according to the company.

Pinnacle Systems (www.pinnaclesys.com) debuted a non-linear editing solution, the miroVideo DC 50. The editing system sports a PCI 2.0 video capture card and a professional breakout box that supports connections to Betacam decks and other component video sources.

Applied Magic (www.appliedmagic.com) announced the On-Scene 10-bit Wavelet compressed video capture and non-linear editing card for NT with an integrated PowerPC processor and up to 64MB DRAM on-board.

You can look for more extensive coverage of the products that were demonstrated and shipped at this year's NAB show in the June issue of *PC Graphics & Video*, so stay tuned.—PCG&V Staff



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MegaView Pro 37	37"/35.0" DVI*	1280 x 1024/75 Hz NI	H: 15-85 kHz V: 40-120 Hz
MegaView Pro 42	42"/40.0" DVI*	1280 x 1024/60 Hz NI	H:15.75 & 20-64 kHz V: 45-120 Hz
MegaView 50	50"/50.0" DVI* Rear Screen LCD	1024 x 768/75 Hz	H: 15/30-62 kHz V: 59-85 Hz

* DVI: Diagonal Viewable Image.

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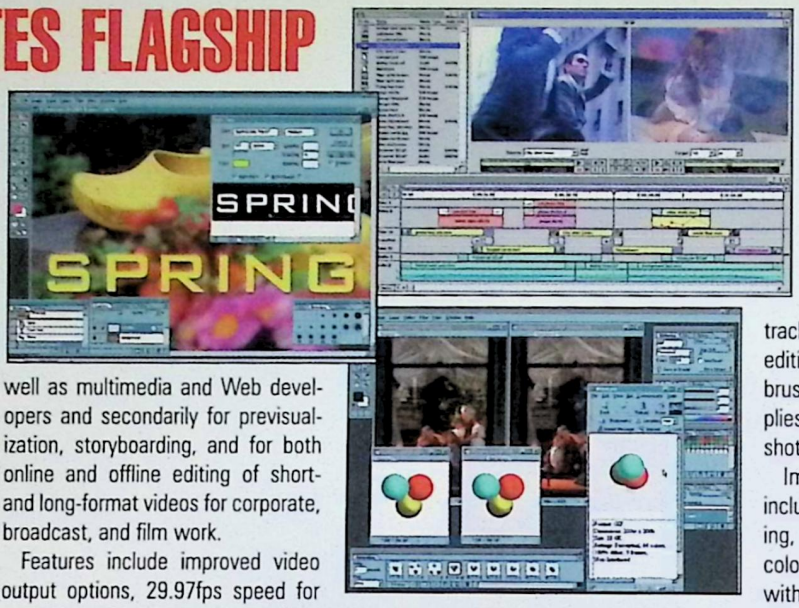
Introduces Web Graphics Product



Adobe's suite of professional graphics products is about to get a facelift, starting with the release of Adobe Photoshop 5.0 this month and continuing with Premiere 5.0 next month. Also in the works is a Web graphics creation and optimization product called ImageReady that is available now in public beta and also will be shipping in June.

The most significant upgrade is to Adobe's video editing software; it's been two-and-a-half years since Premiere 4.2 was released. In contrast to the desktop multimedia focus of earlier versions, Premiere 5.0 is now aimed at the low-level broadcast market—primarily small studios and industrial-video professionals, as well as multimedia and Web developers and secondarily for previsualization, storyboarding, and for both online and offline editing of short- and long-format videos for corporate, broadcast, and film work.

Features include improved video output options, 29.97fps speed for true video editing and audio synchronization, refurbished Edit Decision List support, a redesigned video editing interface analogous to the dual-monitor setup in conventional video editing bays, three-point editing, studio-quality audio tools, key-frameable filters, long-format editing support (up to three hours), better titling capabilities, and an open architecture that makes support for new software and hardware seamless. Premiere will list for $895 with a $199 upgrade.

Photoshop 5.0 delivers the four most requested upgrade features, according to Adobe—multiple undo and redo, editable text with character level formatting, precise color management, and built-in support for spot-color channels. Multiple undo is handled through the History palette, which tracks and displays a list of editing steps, and the History brush, which selectively applies pixels from saved Snapshots, according to Adobe.

Improved text handling includes multiple fonts, tracking, kerning, baseline shift, color selection and display, all within the text dialog. Text remains editable, even after the application of Layer Effects, a new feature that specifies effects like embosses, bevels, and shadows once for a layer and automatically applies them to any edits.

Color management improvements include support for ICC profiles, →

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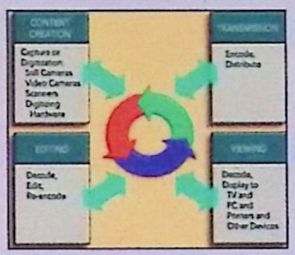
color samplers that analyze and report color values from multiple image locations, selective color range shift in Hue/Saturation, and an RGB channel mixer.

Other features include magnetic lasso and pen tools that automatically follow an image's natural edges, a 3D transform filter, and a measure tool. Photoshop has a list price of $995 with upgrade pricing at $249.

Instead of building improved Web capabilities into Photoshop, Adobe has developed a new product called ImageReady for this purpose. Using a similar interface to Photoshop, ImageReady can load and save Photoshop files with layers intact and creates GIF animations using this Layer info. It has a live view window with actual and optimized previews for each image, as well as file sizes and target download times. Color reduction options include a perceptual adaptive palette and 8-bit color browser dither preview. The list price is $299.—Jacqui Summers

Iterated Pushes STiNG Technology

Iterated Systems has announced a core set of digital image-handling technologies that the company says is designed to optimize everything from image acquisition and image capture to final output and publishing.



Called STiNG, the technology creates a single, resolution-independent, scalable image that can be published in both print and electronic media with no loss in quality as it translates the file between laser printers, imagesetters, proofers, and the Web. There is no need for further optimization, aside from touch up, of the image.

STiNG-based images, the company says, will enable graphics professionals to create a nonlinear workflow between content creation, editing, transmission, and viewing.

"STiNG images are built as lossless images," said Burt Smith, vice president of marketing at Iterated Systems.

"You have the original image and peel off small pieces as you need them.

"We're putting people into a position where they don't have to be worrying about scanning at certain resolutions."

STiNG is the first technology based on the company's Imaging Systems Architecture, a framework that the company says will ease the digital image workflow in production environments including prepress, digital photography, and graphic arts.—John B. Virata

NAB BITS
CONTINUED

Spruce Technologies' (www.spruce-tech.com) DVD Maestro software combines drag-and-drop, real-time preview, and hard drive title emulation features. The company also offers a $60,000 turnkey NT-based system including MPEG encoders and software for the corporate market.

- For those working collaboratively in the content creation market, Jazz Media Network (www.jazzmedianetwork.com) offers a private Java-based broadband network for real-time collaborative work with an uncompressed D1 video-enabled Jazzbox installed at every client's premises.
- Daikin (www.scenarist.com) showcased three NT-based DVD solutions—Scenarist NT Basic for $9,800, Scenarist NT Advanced for $19,000, and Scenarist NT Professional for $29,000.

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Circle 6 Web #210

The Perils Of Fonts

By Kathleen Tinkel and Bill Troop

When it comes to cross-platform compatibility for the publishing industry, we've come a long way from the days—only about a decade ago—when the only file a PC user could hope to exchange infallibly with a Mac user was plain ASCII text. Progress has come just in the nick of time, too, as Windows is gaining momentum as a serious publishing platform. Much of the growth in Windows publishing is among traditional Mac printshops, color separators, and service bureaus, where Windows boxes are being added to existing networks.

Fonts—the building blocks for your text content—are far from identical, and do not work identically on the two main publishing platforms—Macintosh and Windows-based PCs.

The Font Character Layout Dilemma

One of the most confusing things for designers on all platforms is the different layouts that fonts come in. You can divide the world into Adobe, those who follow Adobe's system, and the independents who choose to do it their own way.

Most fonts follow Adobe's standard layout for Mac and PC. This translates well between platforms except for the three fractions on the PC and the two fi/fl ligatures on the Mac, neither of which is available on the other platform.

Adobe's Small Cap/Old Style Figure layout is the same as the standard, except that true small caps replace lowercase characters and oldstyle figures replace lining figures. Most SC/OSF fonts translate well between Mac and PC.

The standard Adobe Expert Set has oldstyle figures in the numeric positions, all five f-ligatures (ff, fi, fl, ffi, and ffl) in the V, W, X, Y, and Z positions, and small caps in the lowercase letter positions. But there are no caps in the cap positions, unlike an SC/OSF set. There are also more fractions, and true superior and inferior figures in upper ASCII positions. All the characters in the lower ASCII slots—those you can access without a control or option key—also translate between platforms. But special characters in upper ASCII positions, such as the extended fractions, may not translate between platforms.

Of the non-Adobe vendors, only the Monotype library (now sold through Agfa) offers many expert sets. These follow the Adobe layout. Other companies, including Bitstream, Emigre, and Alphabets Inc., have a few expert sets, which may follow any character layout they choose.

In fact, many serious font design groups use nonstandard layouts because they are able to include such typographic essentials as oldstyle figures and five f-ligatures (or even six, including fj, or more) in the base fonts, or to make other enhancements to the limited character set in general use.

These fonts should come with a layout chart (or you will have to devise your own). Most of these nonstandard "typographers' fonts" can be successfully translated between Mac and PC formats, but you may have to do a few search and replaces.

The main vendors for commercial-quality fonts are major foundries, including Adobe (800-445-8787); Agfa, which also sells the Monotype library (800 424-8973); and ITC/Letraset (www.itc-fonts.com).

There are also specialized font retailers, including Precision Type (800-248-3668), FontHaus (800-942-9110), FontShop San Francisco (888-333-6687), FontShop Canada (888-443-6687), and Phil's Fonts (800-424-2977).

These companies distribute fonts from independent type designers as well as from the large companies. The most important independent foundry that *only* sells direct in the United States is Emigre (800-944-9021).

If you own a font for one platform, most vendors will sell you a copy for the other platform for less than $10 per weight. To convert them yourself is not a simple task, but you can check out utilities that will help you do it from Acute Systems (www.asy.com) and Y&Y (www.yandy.com).

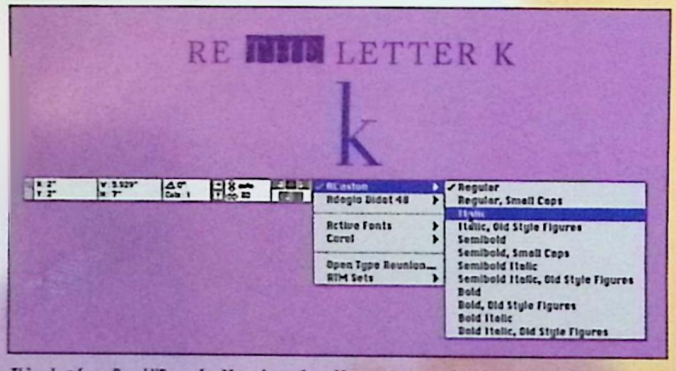
THE PERILS OF FONTS

According to TrendWatch, a prepress and publishing industry research group, 33 percent of 3,000 publishing industry sites surveyed in Fall 1997 expect to buy Windows 95 workstations in the next 12 months (up from 21 percent six months before); and an additional 12 percent are considering NT workstations. (Of the same group, 60 percent plan to buy Macs.) It's clear that while the publishing industry continues to rely on Macs, it is also steadily integrating PCs into Mac environments.

At the same time, some Mac publishers are being compelled—by corporate policy or a sense of insecurity about the Macintosh platform—to switch to Windows, and we are also seeing increases in sales of publishing software to existing Windows customers, many of them newcomers to the commercial publishing business.

Publishing across platforms should be a cinch at this point. Both types of computers can handle industry-standard text and graphic files such as EPS and TIFF. We can all use the major graphic arts application programs—QuarkXPress, Adobe's PageMaker, Photoshop, and Illustrator, and Macromedia FreeHand—whose interfaces and functions are virtually identical on both platforms.

Bizarrely, any file that contains text—which is something like 99.9 percent of everything in print—is likely to run into trouble when it moves from one platform to the other.



This shot from QuarkXPress for Mac shows how Mac users can select font weights by their explicit names—a practice recommended by many Mac service bureaus, though it is not obligatory. In Windows, you would not actually see the weight Adobe Caslon Semi-Bold—which is the middle weight of a three-weight family. You would select the bold attribute from the formatting bar, and that would give you Semi-Bold. Confusingly, you *would* see Adobe Caslon Bold. If you wanted that font, you would select it explicitly, but you would *not* select the bold style on top of that, which would give you a faked Extra-Bold. Mac users don't have to access font styles by their explicit name. They can use the style attributes just as Windows users do. This *must* be done when you are exchanging files across platforms.

That's because fonts, the building blocks of text, aren't really identical and don't work alike on the two kinds of operating systems. In the last decade we've seen endless upgrades to application formats, and operating systems have changed drastically. Yet font formats have largely remained as if written in stone.

That may change when Microsoft and Adobe launch the new font format OpenType, which offers, among other things, font files that can be used on either a Mac or PC (see sidebar on page 22).

But OpenType may not succeed in the marketplace. And even if it does, it may take a year or two to shake out all the kinks. We can't wait that long for remedies for the cross-platform font quagmire.

Following are some of the most vexing problems and the best available workarounds and solutions.

In Search of Font Quality

One safeguard against expensive output disasters is to invest in trademarked commercial-quality Type 1 PostScript fonts. For many reasons, it is best to buy fonts in complete families, one or two at a time. Avoid big collections of fonts, especially clones or knockoffs (i.e., unauthorized copies of trademarked originals) at bargain prices. Expect to pay $15 or more per weight or style (a six-weight family from Adobe and some other major foundries lists for about $100, for example). Smaller font design companies may charge quite a bit more for trendy new styles. Fonts are often discounted, and many companies have monthly specials.

For fast access to fonts around the clock, buy fonts on the Web from the growing number of companies, both large and small, that sell directly from their sites. Visit the Internet Type Foundry Index (ITFI) at www.typeindex.com for the largest collection of links to font companies that sell on the Web. It's also a good idea to get an unlockable font CD from Adobe or Agfa/Monotype—this gives you around-the-clock access to a huge collection of fonts as well as useful information on the history and usage of type.

For professional publishing work, TrueType fonts are not as useful. Few trademarked text families are available (and most of those have been converted from the Type 1 versions). The publishing industry is based strongly on PostScript, and it's sensible to use the compatible font format. TrueType fonts can be excellent for personal use and for Web page display, but they may cause more quality and output problems in Mac or Windows files intended for high-resolution output.

Symptom: Your file didn't output properly and the service bureau says it's because you used TrueType fonts.

Workaround: You need to find out if that's the truth. Some output operators have a knee-jerk opposition to TrueType—if that's the case, find another service bureau. However, TT fonts actually are implicated in some output problems, which are described below.

Symptom: You used a TrueType font and discovered that your imagesetter output is spaced differently from your laser proof.

Workaround: The service bureau's PostScript system may have had a Type 1 version of the same font you used, and this discrepancy caused slightly different spacing. If you're printing to a PostScript device (including any imagesetter), the TrueType font will not print if the Type 1 version is available. The best solution is to buy and use the Type 1 version yourself or to advise the service bureau of the need to deactivate their Type 1 font version when outputting your files.

Symptom: You tracked and kerned your text, which looked great onscreen and okay on a laser proof, but it was badly spaced in the imagesetter output.

Workaround: You cannot trust the screen when it comes to type spacing, even if you zoom in, and a laser printer is only a marginally reliable guide. With enough experience you'll learn to evaluate the screen view—in the meantime, check the film carefully.

Symptom: Your body type looked okay on a laser proof, but spindly and light, with very faint serifs and hairlines, in the high-resolution imagesetter output.

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Workaround: This is a common problem if you use a display font—a font designed for use in large sizes—in text sizes (from 9 to 12 point). Or the font could simply be badly constructed. The remedy is to replace the font with a text font of good commercial quality.

Symptom: You received a page layout file from a Mac user and found the wrong characters in some words (fractions, if the file was an XPress file; odd symbols if PageMaker).

1234567890 instead of 1234567890

Workaround: Tell the Mac user not to use the standard fi and fl ligatures (entered with Command-Shift-5 and -6 in most Mac Type 1 fonts) because these characters don't exist in the matching Windows font.

Alternatively, if you're using an Adobe or Monotype font and it has a companion "expert" set, the expert ligatures will work (and you'll have all five of them, including the ff, ffi, and ffl, not just the fi and fl). You can also agree to use a typeface that doesn't require f-ligatures, such as Sabon, Palatino, Optima, Meridien, or Monotype Walbaum. (Look for any font whose f doesn't hang over the space to the right, creating ugly collisions with upright stems or the dot of the i.)

Symptom: You used ¼, ½, or ¾ fractions (by entering Alt + 0188, 0189, and 0190 from the keyboard) but other characters were substituted when your file was opened on a Mac.

OpenType—Potential Cure?

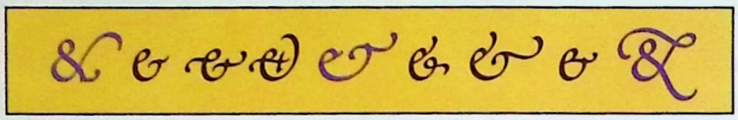
Microsoft and Adobe are collaborating on a new cross-platform font format called OpenType, which is expected to roll out later this year. OpenType fonts will offer two main advantages for users: a single file that can be used on either Mac or Windows machines and large Unicode-compatible character sets that will allow fonts to include small caps, all ligatures, alternates, and virtually any other special characters in a single font.

The phase-in is likely to be fairly lengthy, however. Before the fonts are fully useful we will need support for the new format from applications, operating systems, printer drivers, and ATM, as well as brand-new fonts capable of showing off the extended character sets. However, we will see something this year: Microsoft Windows NT 5.0 will include full OpenType support; and Adobe will release its first OpenType fonts, OpenType-savvy versions of ATM, and a utility to convert existing Type 1 fonts to the new format.

Adobe is also expected to release new versions of its typographic applications—including PageMaker and Illustrator—that support the new format.

If all goes well, OpenType has the potential to ease most cross-platform problems with fonts, as well as allow apps to provide new features, like automatic ligature substitution, that will bring real but effortless improvements to desktop typography.

fig flip affair affix affluent
fig flip affair affix affluent
fig flip affair affix affluent



Top: Some typefaces —such as New Caledonia, Meridien, and ITC Berkeley Oldstyle, can live without f-ligatures, since the f doesn't tangle with the i, l, or another f. But even these typefaces read much better with the f-ligatures originally designed for them.

Middle: Adobe's Poetica typeface has a special supplemental weight with dozens of alternate ampersands. OpenType-enabled apps will be able to present you with an interactive pop-up box when you type the & key so that you can choose which one you want.

Bottom: Oldstyle figures are preferred by most typographers over unnatural lining figures, but you usually have to use a special expert or SC/OSF set to get at them—a massive inconvenience. OpenType fonts can include both styles in the same font, and your apps should then let you be able to choose which you prefer with a single click. Most Adobe oldstyle figures have identical widths, which means you can use them to make really elegant charts.

Workaround: Don't use these fraction characters if your job will need to be edited on or output from a Mac—they don't exist in Macintosh fonts. Nor do the fractions or super- and subscript characters in most "expert" sets work across platforms. Adobe's special fraction fonts (in Helvetica and New Century Schoolbook) will work correctly cross-platform and integrate adequately with many serif and sans typefaces. If you must use fractions from standard fonts, create a PostScript print file.

As an alternative you can build fractions by hand, using the super- and subscript function in your page layout program. Or if you produce cookbooks or otherwise use a lot of fractions, buy a font family with an expert set, and use Macromedia Fontographer or another font-editing utility to create a fraction font by moving the expert set's fractions into accessible low-ASCII positions. Then generate matching fonts for both platforms.

Symptom: You decided to create your own fractions by using the super- and subscript functions in your software, but the fonts looked too light when you output the job on an imagesetter.

Workaround: Set the reduced-size figures in a slightly bolder weight (semibold, if it's available), instead of regular weight. If the only bolder weight is too bold, try stretching the regular weight figures horizontally to 110% to increase the weight of the lines. (These tricks help if you must fake small caps as well.)

Symptom: You work in Windows and really need to use fractions or some other high-ASCII chaccracters from an Adobe expert set, but your output service only has Macs.

Workaround: Create a PostScript print file. This method is virtually foolproof, and is a panacea for most cross-platform type problems—assuming you set the file up correctly. Consult both the printer and the output manager before preparing the file. Ask the printer how the film should be made and ask the output technician how you should prepare the file (you need to know how to set the parameters in the print dialog boxes). You should ask what PPD and print dialog settings to use. Then Print your XPress or PageMaker file to disk, creating a PostScript

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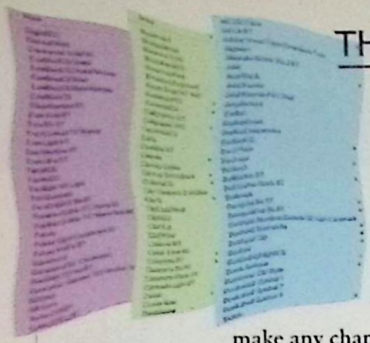

print file, which will contain all fonts and graphics and can be downloaded directly to any PostScript device—laser printer, imagesetter, etc.—from any platform. The output people will not be able to make any changes to the file, so it will emerge intact. This also means they can't help you out by making small edits to the text. If you or your client makes a late change, you'll have to make another print file and send it to the service bureau.

affluent but unaffected?

ff fi fl ffi ffl *vs.* ff fi fl ffi ffl

Virtually every typeface from the 15th century down contains five f-ligatures. Yet most Mac fonts only contain fi and fl, which is worse than none, because if you're going to use any of them, you need all of them. Most PC fonts can't access them at all. OpenType fonts can contain all five and will allow apps to substitute them on the fly automatically. The result could be greatly improved typography without user headache—just what computers are supposed to do forus.

Symptom: You work in Windows and are collaborating on a project with someone who works on a Mac. You were careful to buy identical fonts (same format, same type family name, from the same manufacturer), but even though you have the font open and available on your system, some of the text shows up in your default font or Courier.

Workaround: You probably have different versions of the font. If you have a 1992 version of Adobe Garamond, for example, and the file was created in a newer version, some or all of the names will not match. (Adobe revised many of its fonts in the mid-1990s to make the Mac and PC versions identical.)

You should be able to apply the appropriate font to the text, but the better long-term solution is for both of you to get the most recent version of the font. To check the version of a font, look in the AFM file with a text editor.

Symptom: In Windows you opened a file created on a Mac and found that only the Roman (plain) style of your text font transferred correctly—the bold and italic styles show up as Courier (or another default font).

Workaround: Ask the Mac user to use bold and italic attributes rather than select named fonts of the desired style. These should translate correctly.

There is one danger: A font with more than the basic plain, italic, bold, and bold italic styles will typically have only one set of internal style links (often the plain will be linked to the semi-bold in a six-style family, for example).

On the Mac it's easy to specify a font that doesn't exist (to try to get the bold style by applying the bold attribute to the semibold, for example). Most of the time, Windows wouldn't understand, and you'd get Courier in the file, but in some cases you'd get a faked bold with two images superimposed, a pixel or two offset from each other. This is ugly, and it wreaks havoc with spacing. Adobe publishes a Font Name Reference Table (Fntnames.pdf) that shows which styles are linked for its entire library. You can also print out tests to figure this out yourself. PCGV

Cross-Platform Archive Formats

Zip (.zip) is the standard compression format on PCs; StuffIt (.sit) is the most common format on Macs. Both formats can be expanded on either platform with the right tools.

StuffIt 4.x reads .sit and .zip files, and Mac users can also use the ZipIt utility (shareware—www.zdnet.com/mac/download.html) that can read and write .zip files. You'll need Aladdin's StuffIt Expander for Windows (freeware—www.aladdinsys.com) to decode StuffIt files on the PC. Stuffit Expander will also decode and decompress .arj, .gz, .arc, .hqx, and UUEncoded .uue files.

Executable self-extracting archives from the Mac (.sea) and binhexed (.hqx) files can often be decoded by Stuffit/Win, but make sure, under Options/Cross-Platform, to check the "never" box for Convert Text Files to Windows Format.

Problems most often arise when sending stuffed or binhexed files as email attachments from Mac to PC systems. In this case the email encoding adds an extra layer of difficulty. In many cases running the files through Stuffit Expander twice will give you the right contents.

Watch for several new cross-platform products and upgrades from Aladdin this year.

Sending Files Online

Sending formatted (application) files either alone or as email attachments causes many problems, not only across platforms but between different users on the same platform. Actually, conversion of a properly made file from Mac to PC or vice-versa is generally more foolproof than sending any sort of file across network gateways from one part of the digital highway to another.

The simplest approach is to use Eudora as the email reader because it manages most common archive types appropriately. Eudora runs on most servers, including CompuServe, and a new version that integrates with AOL is expected this year. In the meantime, if you absolutely must exchange formatted files with someone on AOL, the only foolproof solution is to get an AOL account yourself.

If you need to send a group of files at once, use a Zip or StuffIt utility to combine them in one or two .zip or .sit archives. But don't create files that are much larger than a megabyte as they are more likely to fail in the transmission.

When possible, try to eliminate the number of gateways that your mail has to pass through. Using an email service like Hotmail, Jumbo, or Valise adds to the likelihood that your attachment will get corrupted.

Kathleen Tinkel writes about graphic design, prepress and typography for a wide variety of publications. She also speaks and consults on these and related topics. She welcomes comments at ktinkel@compuserve.com. Contributing editor Bill Troop has been writing about computers since 1987. He specializes in desktop publishing, storage, and cross-platform issues. He is also a type designer. He can be reached at billtroop@swanlake.com. Thanks to Adobe for fonts used in the illustrations accompanying this article.

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PINNACLE SYSTEMS

TECHNIQUES

With a bit of foresight, you can build a broadca DV editing solution with off-the-shelf tools.

The Story of a Video Editor Turned Computer Nerd

Build a DV Edit Suite

by Phil Lee

Several years ago after reading about the upcoming release of the Avid system, I remember excitedly telling a friend about this new incredible non-linear computer concept, and he responded with a smirk, "What, will computer nerds now become editors?" Well, in the years that have followed, many editors have indeed become computer nerds. Let me preface everything that follows by this simple confession: I am computer illiterate. I know that sounds odd since this happens to be a computer graphics magazine, but there it is, I admit it. By sheer necessity I have managed to boldly embrace technology, but without actually knowing what I was getting into. I think the time has finally arrived where technically challenged people like myself can actually navigate through the muck and create art.

After spending several years as an on-line editor in a linear digital suite, I felt that the time was right to branch out on my own. My first intention was to buy a used low-res Avid for off-lines, and to continue on-lining on the Grass Valley systems I had grown so accustomed to. However, that plan took a dramatic turn when I discovered that the "third wave" of non-linear technology that I had been anticipating for so long had actually arrived.

The first wave consisted of the expensive, pioneering systems used primarily in feature and high-end post production, while the second wave was made up of less expensive turnkey systems such as Avid, EMC, Media 100, Video Cube, Postbox, and a myriad of others.

The third wave arrived when it became possible to assemble a reasonably priced, high-quality, non-linear system with a minimum of professional features using off-the-shelf components. Although the reliability, track record, and tech support of a turnkey system is attractive, the negatives far outweigh the positives in my opinion when compared with an editing system built from several different manufacturers.

First and foremost is the obvious: cost. When you buy a complete system, you also are paying for all the R&D that went into that product. The concept that a product would only work with hard drives and cards that were available through that same company drove me crazy. Once you "bought into" that mentality, you really didn't have many options as new upgrades and additions for the system became available. You either paid the new price for the add on/upgrade, or you continued

Ammunition

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- Inscriber StudioPak 3.2
- Boris FX Pro 3.0
- Adobe After Effects 3.1
- Sonic Foundry Sound Forge 4.0
- Killer Tracks/NJJ Music Library
- Canary Sound Effects Library

HARDWARE

- 200MHz Pentium/WindowsNT
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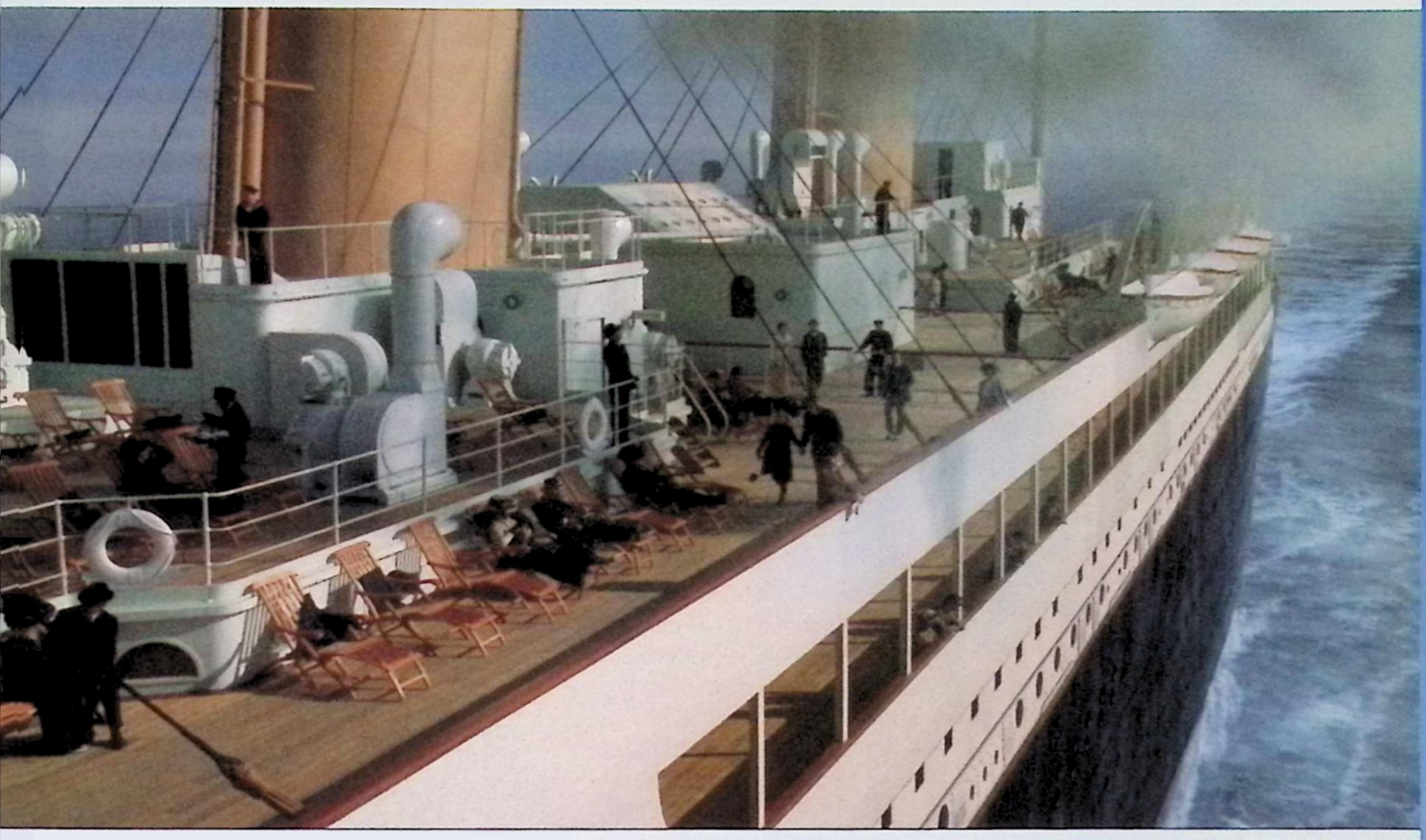
- Micropolis 1991AV ext drive
- Seagate ST1917N ext drive
- External Iomega Jaz drive
- JVC BM-H1900SU monitor
- Sony UVW-1800 BetaSP rec.
- Sony CDP-XE500 CD player
- Panasonic RAMSA WS-A80
- Samson Servo 240 amp
- Mackie Micro 1202-VLZ mixer
- DPS Perception PVR-2500, AD-2500
- DPS FX-2500 accelerator card
- Antex StudioCard

The tools used to create a broadcast-quality non-linear editing system can be found at most computer resellers.

LightWave 3D 5.5

"Titanic really shows what computer animation can do for a film. We're very proud of it."



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"Titanic was big in every way. A big film. A big challenge. And, in the end, a big reward. But the trick with the animation was to achieve the look and result James Cameron was going for.

As huge as the Titanic set was, we still had to add the hull and extensions to the scenes. And when the treasure seekers tell Old Rose what happened to the ship that night, it's computer animation that visualizes the story.

We chose LightWave 3D to bring it to life. Its speed, workflow and how easy it is to learn and use are terrific. That's important, because our artists are so exacting about quality, we tinker endlessly on details other people may never even see. But doing that means constant review and feedback. So, the faster we can go from idea to visual in film or commercial work, the more time we have to review and get exactly what we're after. LightWave 3D gives us that time.

LightWave 3D also lets you model, animate, light and render in one package – which speeds up the creative process.

With Titanic, we had a wonderful chance to tell a story…and with LightWave 3D, we had a great means of achieving that."

– Edward Kummer, Vice-President of Digital Operations, Digital Domain

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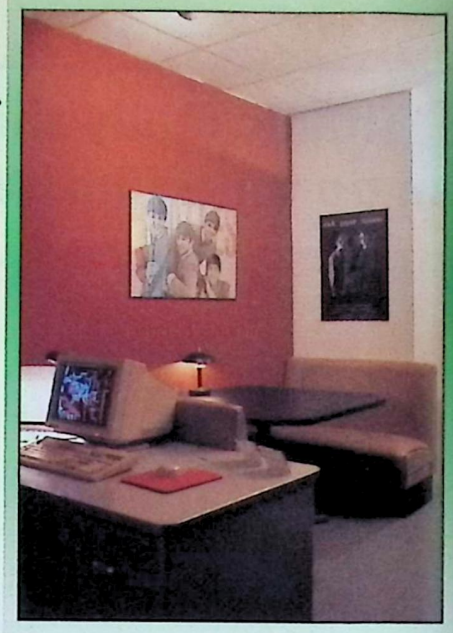
using the older version, only to be informed that the company would no longer support that version.

Instead, the idea that you can research the marketplace, decide which hardware/software solution is right for your specific needs, and make individual choices based on cost and compatibility is a tremendous plus.

Even now, one year into my leap, I love the fact that if a new editing package or FX card is suddenly available I have the instantaneous option of plugging it right into my current system and off I go!



The receiving room at Lee Editorial.

WHAT AM I GETTING INTO?

Before finalizing equipment decisions, I consulted with several friends in the industry, and received many warnings and horror stories regarding every possible malaise: audio falling out of sync with video; system crashes; incompatibility of cards, hard drives, and software; not having a single company to call up and scream at for tech support when your "do-it-yourself system" is emitting smoke while your producer is crying softly and banging his or her head in the corner. I believed all the stories, but I also felt that most of the pieces of the puzzle, up until now, were not available on a truly professional level.

What made me dive headfirst into this technological abyss? I did not have the luxury of being able to walk into a showroom and seeing a fully functioning system with all the components I was interested in. It is possible to go through a dealer that sells pre-configured systems, but be aware that you are getting components based on the dealer's decisions, and you can expect to pay a "system" price rather than what you would pay if you obtained everything at the lowest cost from a variety of sources. In the end, sheer stupidity, eternal optimism, and a growing confidence in my own abilities as an editor won out.

My lack of computer dexterity had its limitations, however. I was able to follow the basic installation instructions for cards and hard drives, but it became clear very early on that I needed professional help to properly configure the system. I'm sorry, but interrupts, port addresses, and virtual memory hold absolutely

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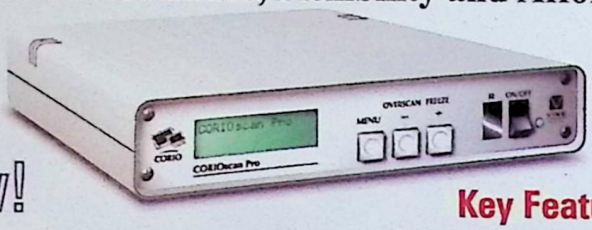

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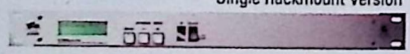

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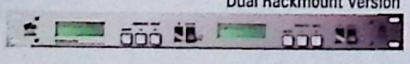

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"I will never do another 3D project where realistic lighting is the goal without using Lightscape...there's no better way to make a scene look real."

James G. Jones
Owner/Animator
Pixel Systems

no interest for me. After some initial panic, I located a Dallas, TX-based company, Community Video Services, that knew about such things, and they were able to finish the configuration for a reasonable fee.

HARDWARE

Okay, let's get down to basics and begin with hardware. Be advised that most of what I'll be talking about is about one-year-old technology, and as you know, anything you buy related to computers becomes outdated about the time you get it home and plug it in.

The story all begins with Windows NT. My only non-linear experience was Avid/Mac-based, and being a computer neophyte, my comfort zone was understandably with Macintosh.

However, once I started researching, everywhere I turned, all I could see was NT. Animation, graphics, compositing, editing—you name it—anything new coming out seemed to be on this platform. Simply put, the NT decision was actually no decision at all.

I started with a 200MHz Pentium clone with 64MB RAM. (I have since upgraded to 128MB.) Part of what gave me confidence in building this "piecemeal" system was the fact that several components made by different manufacturers were designed to work together. So, regardless of which equipment selections you make, do your homework and make sure everything is compatible.

To get video into and out of my system, I opted for Digital Processing Systems' PVR-2500 Perception system, including the AD-2500 capture card, and the FX-2500 effects accelerator card. The Perception system offers composite, S-Video, and component in/out. The FX card drastically reduces render times on specific transitions; for example, bringing a 30-frame dissolve home in about eight seconds. The Antex StudioCard was my choice for audio, offering crystal XLR in/out connections. Although I had heard and read about several people in the past experiencing audio sync problems when assembling systems, the DPS and Antex combination has been a surprise, performing flawlessly.

Media storage is probably the most volatile area of any non-linear system; prices and performances seem to be in constant motion. A year ago, I started with a Micropolis 1991AV 9GB drive and soon after added a 9GB Seagate Barracuda ST1917N. Both drives have performed consistently well, delivering high-quality compression and picture quality that rivals systems costing considerably more.

This is one area where you should do your homework to ensure you are getting the best solutions available. Make sure you get a list of approved, compatible drives from your capture card manufacturer.

I considered buying a used/rebuilt BetaSP deck to save money, but instead discovered that a very reasonably priced Sony UVW-1800 is available new for less money. In addition, I use two JVC consumer level VHS machines (for client approval dubs), along with a Sony CD player.

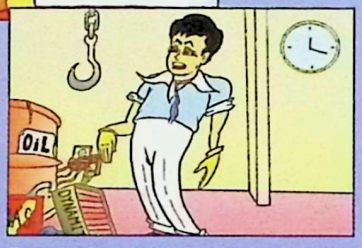
ADDITIONAL CONSIDERATIONS

The following equipment is not essential, but I highly recommend it if you are trying to present post

Lee Editorial Clients

DNA Productions

DNA is a full-service animation company that has operated in Dallas, TX, since 1987. DNA serves the entertainment, commercial and corporate markets by providing 2D and 3D character designs, animation, computer graphics, and other types of animated visuals.



Top: Nick Gibbons/DNA; "RadioActive Crotch Man" (Spike & Mike Animation Festival 98). **Above:** Nick Gibbons/DNA; "Fast Driver" (Spike & Mike Animation Festival 97) appeared on MTV's Cartoon Sushi in March.

Co-owner Keith Alcorn on working with Lee Editorial: "I have just recently experienced the wonders of Speed Razor. We were commissioned to produce five animated episodes of CBS Saturday morning's 'Weird Al Show.' The speed and flexibility of Razor made the posting process the most stress-free portion of production. It allowed us to make numerous changes and gave us an incredible amount of creative freedom. Being able to use this affordable technology as opposed to working in linear environments is fantastic."

DNA animator and creator of RadioActive Crotch Man and Fast Driver, Nick Gibbons, says, "Working with Razor has dramatically cut down the time involved in the editing process. Watching Phil zip through what used to take hours in just minutes has been a great relief on my wallet and my time. The difference between traditional editing and editing with Speed Razor is like the difference between pushing a car and driving it.

F Five Films

F Five Films is a Dallas, TX-based script-to-screen film and digital video production company that produces commercials for the local market.

Says writer/director William Kaufman: "Working with Speed Razor has given us a tremendous edge for a variety of projects. Budgeting for post has been a great cost savings, especially for projects that are going direct to video.

Above: F Five Films; "Absolut Initiative Fashion Promo" Seagrams/Dallas Design Initiative.

"The cost savings of this system have enabled us to stay competitive by keeping most of our expense up front in the production end. We've finished everything from 16mm films, fashion videos, and corporate projects with Lee Editorial. Our confidence in this non-linear solution is such that we have a feature project, *The Prodigy*, scheduled for posting in Summer/Fall 98."

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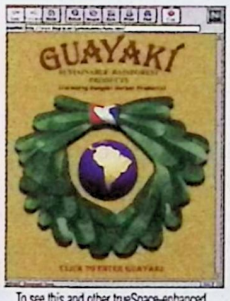

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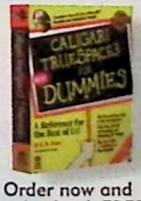

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Circle & Web # 217

service at a professional level. Most non-linear systems, regardless of make or model, use silly miniature speakers that, regardless of sound quality, don't quite pack enough testosterone, either aurally or aesthetically.

Instead, I went with Panasonic's cool-looking RAMSA WS-A80 160-watt two-way speakers, powered by a Samson Servo 240 studio amplifier. (And no, I don't "rock the house" on every edit, but it's nice to know that I've got the firepower when the need arises.) Depending on your software, chances are you will have some sort of internal mixer/equalizer, but I suggest you get a small, inexpensive external mixer such as a Mackie 1202-VLZ for a couple of reasons. I come from a traditional environment where one reached out and turned knobs as opposed to opening windows and clicking and dragging.

Lee Editorial started a year ago with a single Windows NT-based non-linear editing workstation.

And, just as important, it's nice to have a separate box that can route everything quickly: CD, various video decks, and room monitor level.

Last but not least is the video monitor. Some systems allow you to get away with using a computer monitor to watch playback, but don't make this mistake if you plan on actually having clients sit in during edits. I have seen some systems where people are using inexpensive monitors or even TVs, but I firmly believe that the presentation of the image in your room should not be an area where you cut corners.

Even though the final product may be viewed on VHS tape on a less than state-of-the-art deck, your client deserves to see his or her work in pristine component video. The most reasonably priced, high-quality monitor with component/S-Video/two-composite inputs is the JVC BM-H1900SU.

SOFTWARE

All right, enough with the hardware issues, now on to the fun stuff: software. I don't want to offend Premiere users, because I know there is a loyal base out there doing fine work with that product, but for me, I couldn't bring myself to seriously consider it as a viable option. This was based simply on the fact that over a period of years as an editor, my knowledge of the product was limited to bits and pieces I heard from friends and from articles that presented Premiere as a lower-cost product that was not blessed with a very intuitive interface. And for me, above all else, an editing software package had to be available with

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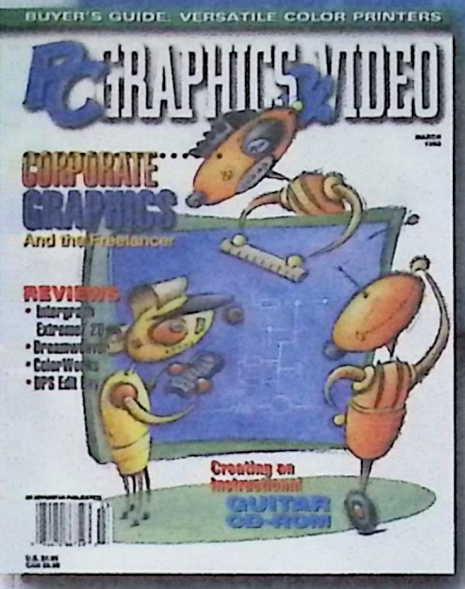

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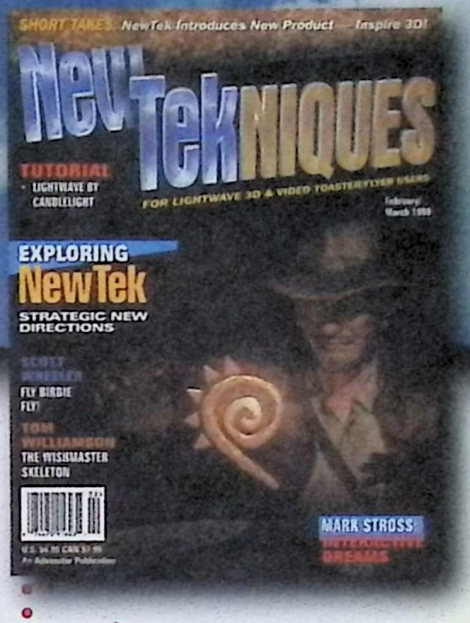

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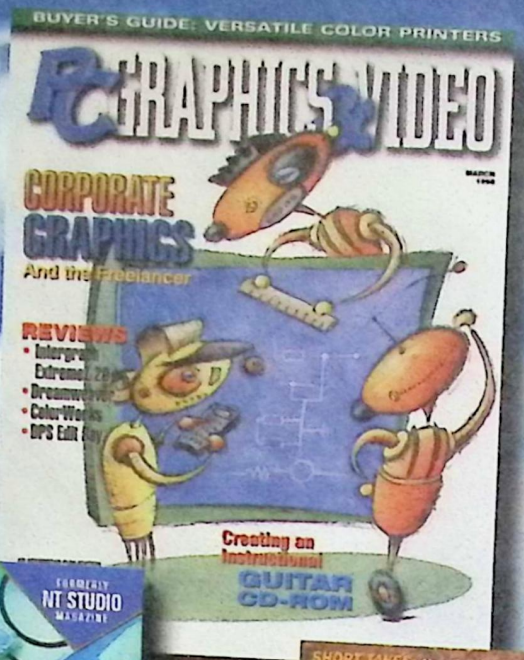

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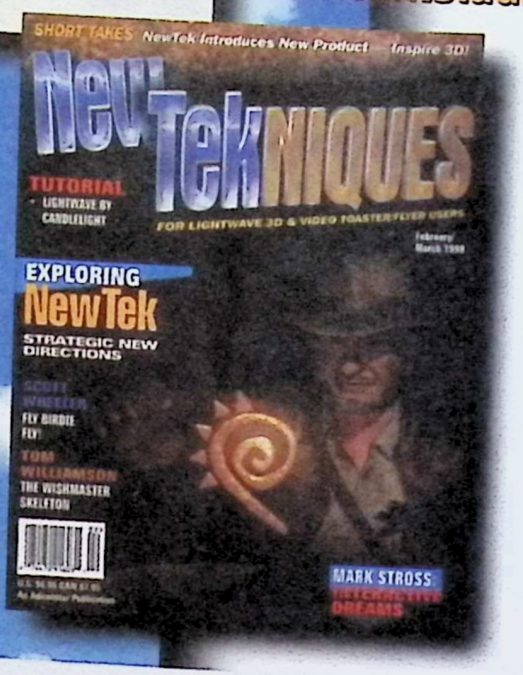

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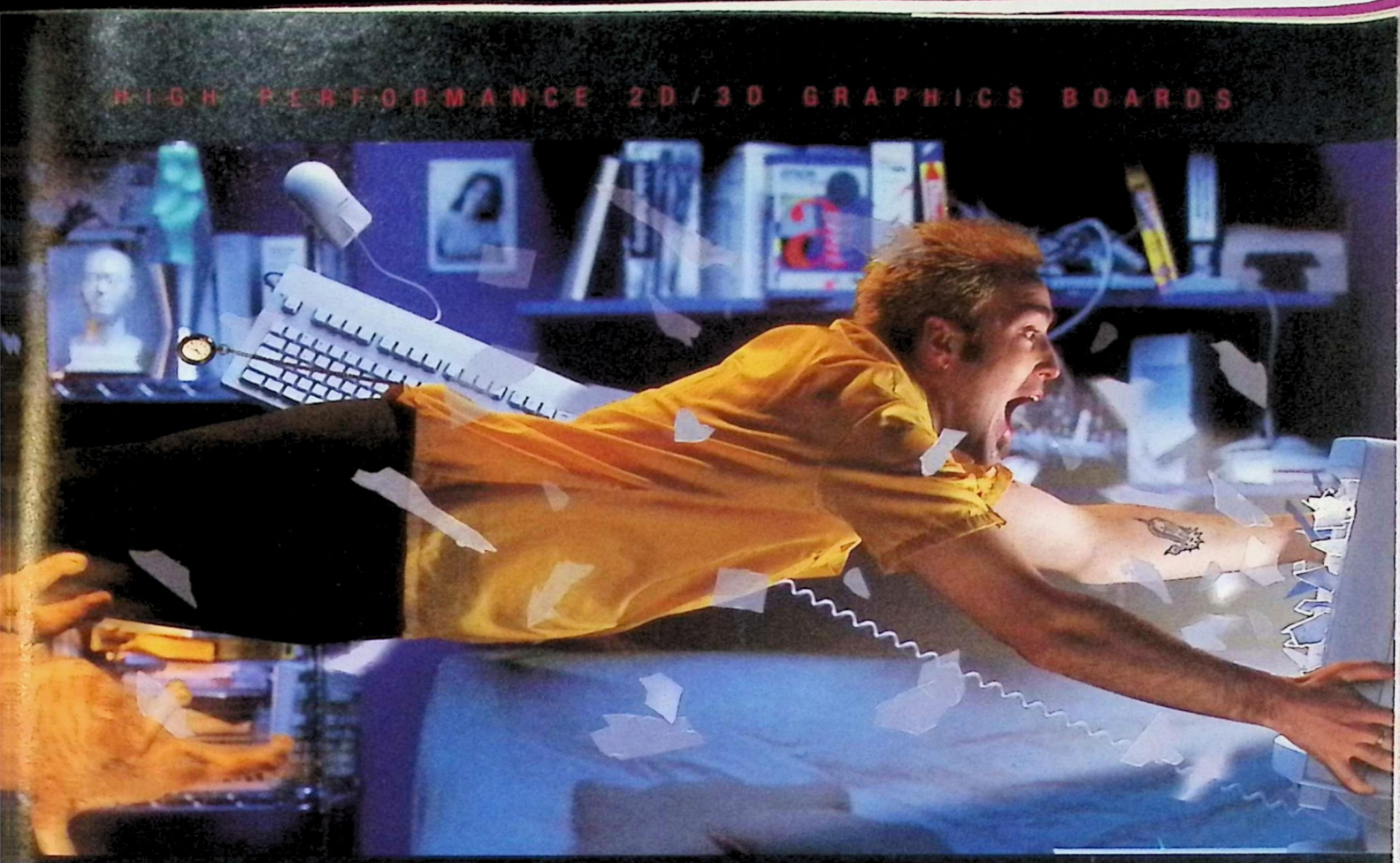

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at least a minimum amount of professional features. Hopefully Premiere 5.0 will offer more profesional features.

After researching in:sync's Speed Razor 3.5, by reading reviews about how specific companies were using the product, and learning about its integration with the DPS Perception, it was an easy decision.

Razor features real-time audio layers, unlimited video layers that allow endless combinations of rendered effects, batch capturing, and many other features—all in a user-friendly environment. Understand, this is not a $5,000 program, so don't expect the world.

My opinion one year into this ourney is that for the money, you can't touch it! Because of its reasonable cost, I have been able to enhance it with additional products that more than make up for the areas it doesn't cover. (in:sync's latest version, 4.0, should be available by the time you read this.)

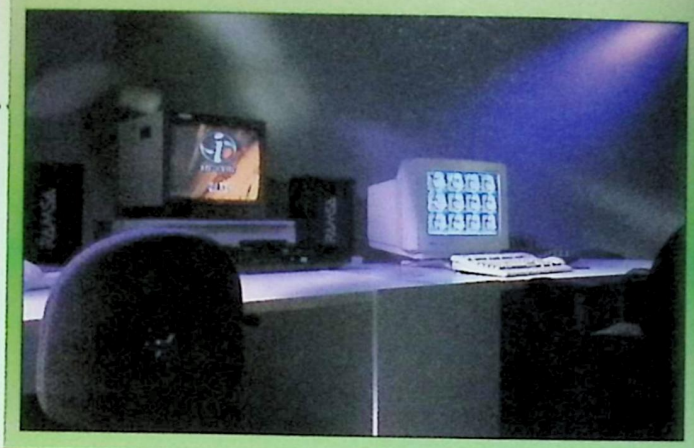
For example, one of the finest character generator's available is Inscriber Technology's Inscriber. I have worked with this package for six or seven years and was delighted when a scaled-down version was introduced for NT/Speed Razor, the Inscriber Feature Pak.

The internal CG in Razor is very limited, and again, I don't fault in:sync because it is not trying to be all things to all people. (If that were the case, Razor would carry a higher price tag.) Feature Pak offers fully changeable soft shadows, outlines, beveled edged draw objects, gradients, background patterns, and a host of other features.

Another area where I have seen a great improvement is in 3D DVE-style effects. I purchased a package that had a nice-sounding name, but actually turned out to be quite limited, and not professional-level. However, I have since discovered Artel Software's Boris FX 3.0 Pro. Okay, as with any other product at this level, we're not talking real-time here yet, but for the money it is great to be able to add clean, professional effects such as ripples and cubes, all for a price that only a short time ago a client would have spent in an hour or two in a high-end room. Bottom line here is that Boris FX, with its vast library of time-saving pre-existing effects, time-line style interface, and ability for user-defined effects, is in a class by itself.

(At press time, Artel is releasing version 3.1, which promises to be even bigger and better.)

I recently Adobe After Effects for NT and was blown away with its seemingly endless array of compositing features. This package offers rendered layering capabilities that are similar to the pre-read layering I used to do with a digital Betacam and a digital switcher with one difference: You have the capability to edit any of the layers at any point in the creative process. (In the pre-read world of layering, each pass is done in a linear fashion, and once it is recorded to tape, your options regarding revisions are very limited. (For example, if your client decided he didn't like layer six of an eight-layer effect.)



Top: Main workstation where the majority of editing is done. Left: The tools I use can be purchased at most computer stores.

And finally, let's talk audio. Often overlooked, audio ad-vances within the framework of computer technology are nothing short of amazing. The best package I have worked with has be-come a standard of the industry —Sonic Foundry's Sound Forge, and its array of support plug-ins. I can think back a couple of years to edit sessions, where, after endlessly dialing EQs around on a board, trying to eliminate background hiss or hum from an air conditioner, etc., a point was finally reached where neither I nor the producer was happy with how the results affected the sound of the talent's voice. We agreed to move on out of necessity. Sound Forge offers noise reduction that can literally lift unwanted background noise away from a track. It also has extensive equalization and effects, including a wonderful acoustics modeler plug-in that alters audio to sound as if it was recorded in a vast variety of environments. I am sure this technology has been around for a long time at a higher level, but like everything else we are discussing, it has finally trickled down to the masses.

FINAL THOUGHTS

When dealing with computer technology, there is always the fear of when and what to buy, since everything seems to be outdated so quickly. However, if you opt to put together a system made from various components, you have a built-in open architecture safety net, simply because of your ability to react to new advances on an individual basis. In conclusion, my advice is to do as much research as you can, talk to others who are currently working with various systems, and attend NAB and other trade shows whenever possible. Depending on your level of expertise, locate an individual or company that can help with configuration of your system. Don't be afraid of the less-than-ideal results lower end pioneering systems once delivered; the future is definitely now.

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Phil Lee is the owner/editor of Lee Editorial. You can reach him at (972) 401-8206 or at leedit@flash.net.

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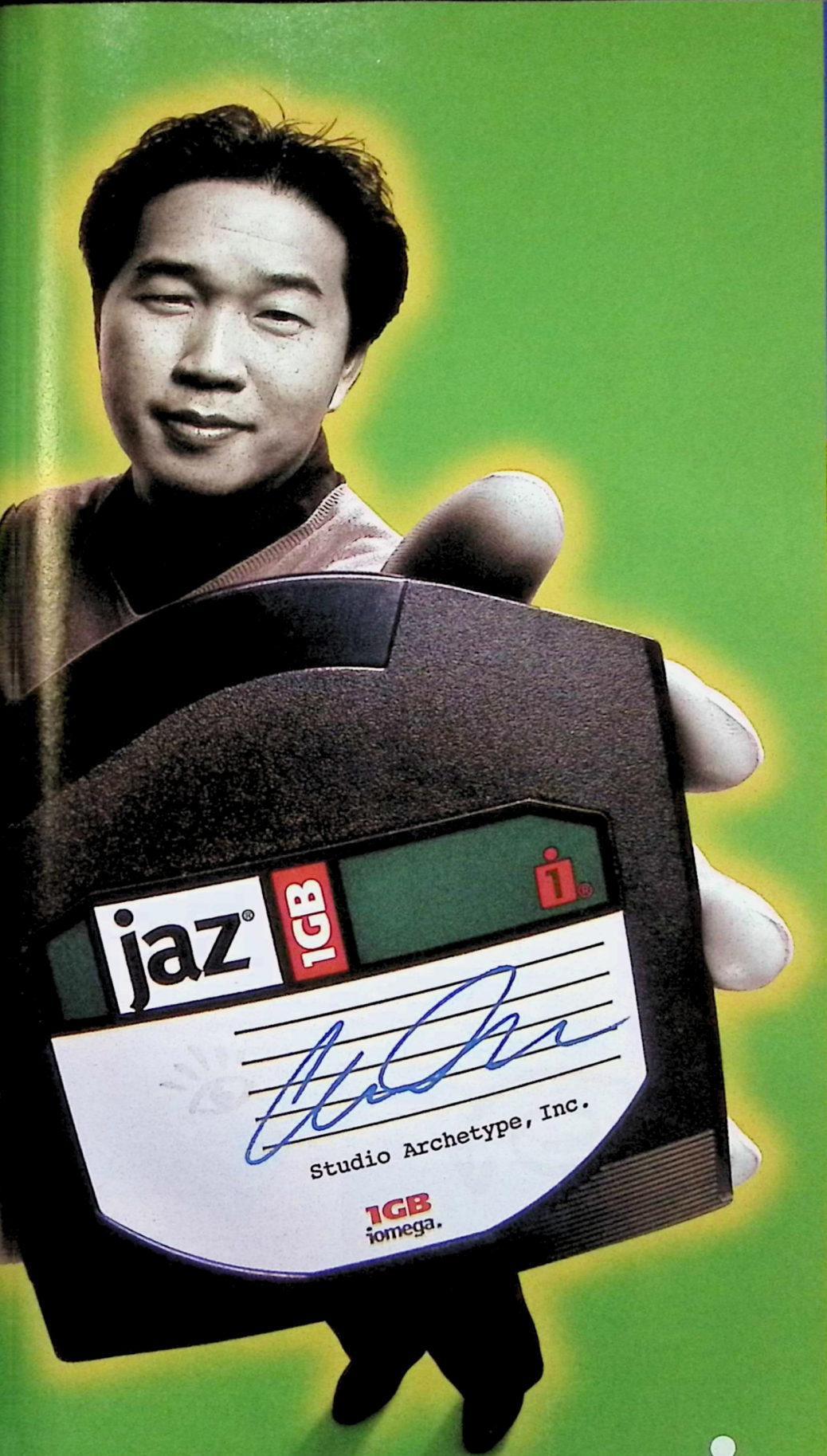

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PRODUCTS REVIEWED

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- Micrografx Picture Publisher
- Ulead PhotoImpact 4
- Vorton Riptide Photo Studio

Business-Level Image Editors

By J.V. Bolkan

Image-editing applications have become more affordable and more powerful.

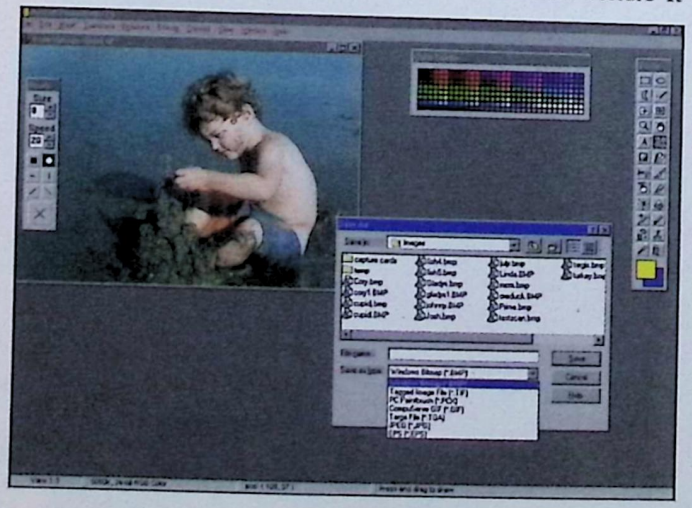
In a perfect world, everything would follow the pattern of digital photograph editing software. The latest software is faster, easier to use, cheaper, and loaded with new features. Fueled by the explosion in cheap input sources such as digital cameras, scanners, and the Internet, business-oriented photo editing software is an exploding category.

We looked at six programs selling for less than $100. None of the programs is robust and full-featured enough to compete directly with Adobe's Photoshop in every area. But many compete strongly in certain areas such as Web graphics creation and especially in ease-of-use.

The market seems to be dividing into two segments: project-based and traditional-style image editors. Project-based programs, such as Adobe's consumer-based PhotoDeluxe, tend to focus on assisting users through the steps of capturing, retouching, enhancing, and placing the resulting image into a template.

Many of the traditional-style programs have added wizards and templates, but their target remains the photo rather than its final usage.

We looked at six products, but could have added another six without searching too hard. We looked at Microsoft's Picture It 1.0, but decided not to include it because a newer, and presumably improved version is currently shipping but didn't arrive in time. We also tested Vorton's new PhotoZone editor, but because it was still in an early beta-release version, we didn't include it, either. The choices are there, the prices are attractive, and the performance is surprisingly good across the board.



ArcSoft's PhotoStudio has well-designed control dialogs, and sports such advanced capabilities as CMYK separations and custom plug-in filters.

ARCSOFT PHOTOSTUDIO 2.0

ArcSoft's PhotoStudio is a standard-style image editor with a full suite of filters and special effects.

Although the main interface is uninspired, the control dialog boxes for applying effects and filters are very good. Two large windows enable you to judge the results of adjusting various sliders by showing the original image and manipulated image next to each other.

The program offers plenty of image editing power and control for the typical business user, but stops short of the depth found in some of the other packages. Most notably, the program only supports seven file formats, GIF, JPEG, TIFF, PCX, PCD, TGA, and BMP. The FlashPix format and a host of more obscure inter-platform and Web-based formats are not supported.

PhotoStudio, thanks in part to its sufficient, but not ambitious,

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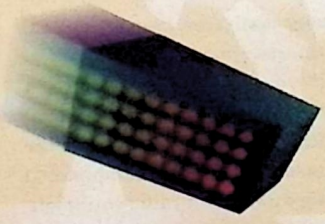

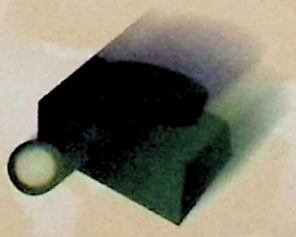

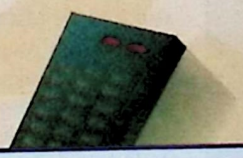

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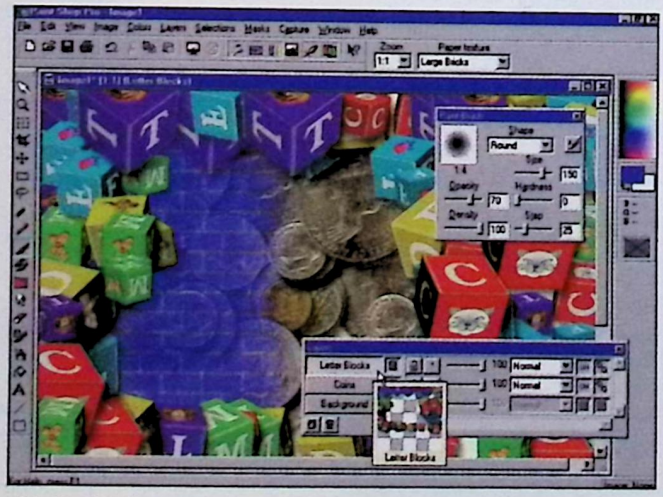
COMPANY	ARCSOFT	JASC	MGI	MICROGRAFX	ULEAD	VORTON
Product	PhotoStudio	PaintShop Pro 5	PhotoSuite	Picture Publisher 8	PhotoImpact 4	Riptide Photo Studio
Price	$49	$99	$49	$99	$99	$49
Platform	Win NT/95	Win NT/95	Win 3.1/95	Win NT/95	Win NT/95	Win NT/95
Formats*	8	43+	7	55+	33+	40+
Batch/macro	no	both	no	both	both	batch
Slideshows	yes	yes	yes	yes	yes	yes
MMX	no	yes	yes	yes	yes	no
FlashPix support	no	yes	yes	yes	yes	yes
Auto Web features	yes	yes	yes	yes	yes	no
GIF animation	no	yes	no	yes	yes	no
Layers	no	yes	no	no	no	no
Auto adjustments	no	no	no	good	good	no
Drawing/paint	good	excellent	good	excellent	excellent	poor
Filters	good	excellent	very good	excellent	excellent	fair
Special effects	good	excellent	good	excellent	excellent	fair
Clip art	good	fair	good	excellent	excellent	poor
Ease-of-use	good	fair	good	fair	fair	good
Power	good	excellent	very good	excellent	excellent	poor
Suitability	good	very good	very good	excellent	excellent	fair
Web features	good	excellent	very good	excellent	excellent	fair
Value	good	excellent	very good	excellent	excellent	poor

* Some variants are counted as separate formats by some manufacturers and not by others.



PaintShop Pro offers many of the advanced features of Adobe Photoshop, such as the capability to handle multiple image layers and CMYK color space conversion.

feature set, is relatively easy to navigate and use. However, it lacks the automation, wizards, and macro features found in nearly all of the competition. Also absent is a focus on Web graphics. The program supports the two most popular Web image formats, but it doesn't support GIF animation or HTML templates.

Some well-designed control dialogs and a respectable feature set with some advanced capabilities such as CMYK separations and custom plug-in filters just aren't enough to propel this product to the top. More automation, Web features, and a stronger import/export engine are needed to compete with the top products.

JASC PAINTSHOP PRO 5 (BETA)

PaintShop Pro is the unrepentant sports car of this group—lots of power and few concessions to comfort.

If you know how to drive a full-blown image editing program, PaintShop Pro has all the controls. On the other hand, if imaging isn't your life, you might have trouble getting the program to perform.

We looked at a late beta version of PaintShop Pro 5. The interface could be a close cousin to Adobe's Photoshop, and like its upscale competition, the program is dense with features.

PaintShop Pro is one of the few programs that handles multiple image layers. It also enables custom settings for professional-level features such as CMYK color-space conversion.

PaintShop Pro has always been a strong Web graphics editor. A new Animation Shop application is now bundled with the program for animating GIF files. Every common Internet graphics format, as well as many obscure variations, are supported. What you won't find are automated wizards and macros for creating your Web graphics. Likewise, the program lacks some of the useful HTML utilities found in Ulead's PhotoImpact and Micrografx's Picture Publisher.

If you want every conceivable imaging feature and almost inconceivable control of those features, you can spend well over $500 for Photoshop or you can buy PaintShop Pro for less than $100. Many business users will probably balk at the relatively steep learning curve, but more dedicated artists will be delighted with the depth of this program.

MGI PHOTOSUITE 8.05

One of the best-selling low-cost photo editors, MGI's PhotoSuite is a strange combination of project-based and traditional image editor.

The two faces of the program aren't well integrated, and the included projects and sample images are weak in comparison to some of the competition.

The first screen you see when opening the program is a friendly icon-based activity guide. You're given the option of loading an image, editing an image, loading an album, viewing a slideshow, printing, creating various projects, or applying filters and special effects.

Depending upon your choice, you'll either be shuttled to the standard-style image editor as in the case of loading a file, or you'll enter the minimalist project interface.

The image-editing module is quite good, especially considering that the program is relatively old and on the verge of being replaced by a revamped PhotoSuite 2. (Not available at press time.)

The program supports the FlashPix format, takes advantage of MMX technology, and handles a respectable number of file formats, including many digital camera and Web-based types. The feature set isn't as deep as most of the traditional-style programs, especially in dedicated Web features.

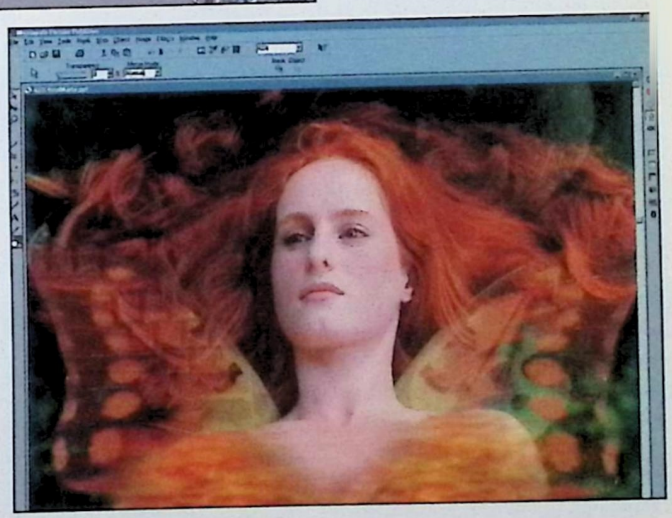
The real problem with PhotoSuite is the horrible project interface and relatively sparse filters and effects.

If you choose a project, such as building a greeting card, you enter a bewildering "print preview" screen where your choices are far from obvious, and extremely limited. The included templates are childish, non-editable, and confusing. At one time, just having these features was revolutionary, but the bar has been raised considerably.

MGI has a well-deserved reputation for innovation and ease-of-use. Nothing demonstrates how quickly photo-editing applications are improving more dramatically than how far behind this once cutting-edge program has fallen. Fortunately, the new version should be available shortly after you read this.

MICROGRAFX PICTURE PUBLISHER 8

Once a close competitor to Adobe's Photoshop in the professional realm, Picture Publisher has been repositioned as a high-end Web graphics editing tool.



Above: MGI PhotoSuite supports the FlashPix file format. **Right:** Micrografx Picture Publisher offers advanced special effects.

Much of the depth and control remains from its former incarnations, but new features are primarily Web-centric.

Picture Publisher looks very much like a complex, high-end editing application. The menu structure is deep and dialog boxes provide intricate controls over many functions. This may scare novice photo editors away, but unnecessarily.

To increase usability, many programs simply cut or limit features. Micrografx's approach with Picture Publisher is to include an extensive tutorial and numerous project wizards. Taking the concept of wizards one step further, Picture Publisher includes an integrated macro language so you can, in effect, create your own wizards. The program is also Microsoft Office 97-compatible, so users of Word, Excel, and other Office apps will be familiar with the menus.

Picture Publisher is rich in Web-specific features. Animated GIF graphics, Web page-style templates, HTML image maps, interactive compression and color palette configuration, a watermark plug-in (for protecting your images online), and even a Web-site graphics cataloging utility are all built in. The included bevel factory utility enables you to create 3D effects for text and buttons.

If special effects are what you want in an editor, Picture Publisher delivers. In addition to the 3D effects, the program has spectacular lens flares, halos, rays, and other lighting effects. You can also warp and distort your images, use the large collection of included filters, and add third-party plug-in filters.

As if one of the deepest feature sets in the category wasn't enough, Micrografx includes a huge collection of useful and surprisingly high-quality clip media—10,000

images, 500 seamless background textures, and 250 TrueType fonts.

I had problems getting the program to display photos correctly at some resolutions with my Intergraph Intense 3D Voodoo graphics card. Micrografx technical support responded quickly, but was unable to duplicate the problem on their system and it remained unresolved at press time.

Picture Publisher is targeted directly at the professional Web page designer. Its closest competitor is Ulead's PhotoImpact 4.

ULEAD PHOTOIMPACT 4

Ulead's PhotoImpact 4 emphasizes its considerable Web graphics capabilities. All business, PhotoImpact is Microsoft Office 97-compatible and features a no-nonsense interface.

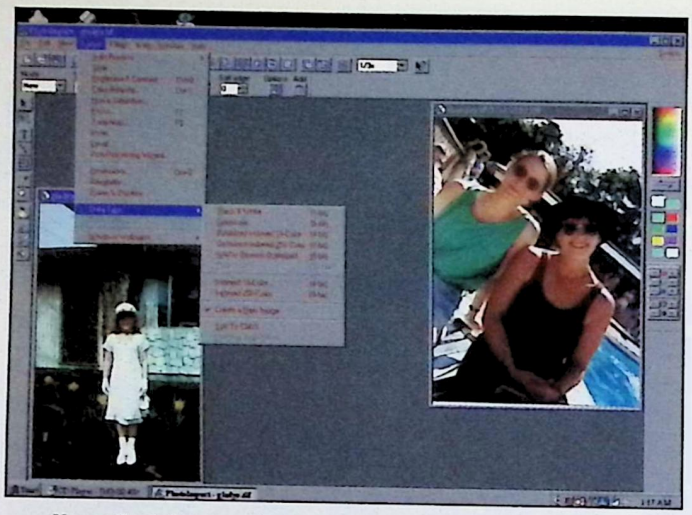
Much like its nearest rival, Picture Publisher, PhotoImpact is a deep program that offers fine control and virtually unlimited creativity. And like its rival, PhotoImpact eases the learning curve and improves usability by including numerous wizards and automatic procedures.

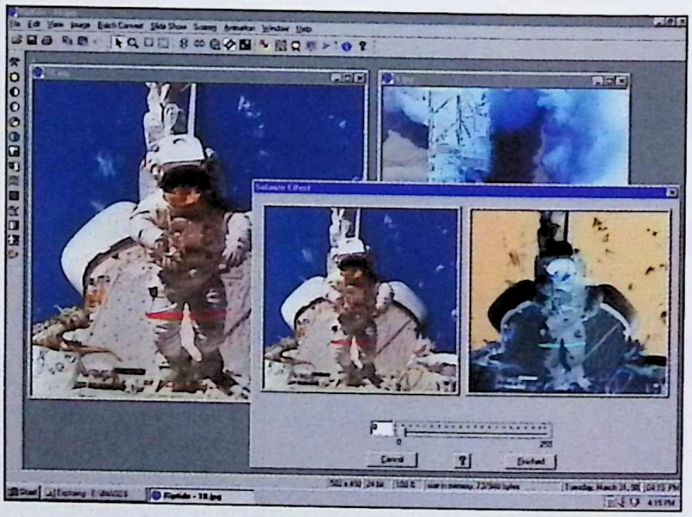
PhotoImpact is loaded with Web-related bells and whistles such as a button designer, a Web album and slideshow, GIF animation, and a wonderful SmartSaver utility for tweaking image compression and color settings.

In addition, the program includes a slick, seamless texture generator, 3D effects, and a particle effects module. The dialogs for all these tools offer excellent control without being cumbersome to use.

The included clip media is high quality and quite extensive. There are 42 Web page templates, 3,000 photographs, and 250 GIF animations.

Overall, PhotoImpact edges out Picture Publisher due to the strength of its dialog controls, the texture generator, and the particle effects. PhotoImpact accepts 32-bit Photoshop-standard plug-ins,





Above: Ulead's PhotoImpact includes a seamless texture generator. **Right:** Vorton's Riptide supports more than 40 file types.

and enables you to create and save your own.

Choosing between these packages could come down to which is more steeply discounted in the store, or even which has the most appealing box art—the call is that close.

VORTON'S RIPTIDE PHOTO STUDIO

Riptide's price is good, it is fast, and it does what it claims. Unfortunately, it just doesn't claim to do enough.

Riptide has a very simple interface, yet lacks many of the automated touches and wizards that make many of the other programs so easy to use.

The program focuses mainly on the basics: opening, converting, and saving images. Actual editing features are either rudimentary or, as in the case of text or drawing tools, simply non-existent. It is impossible to select any shape other than a rectangle, making it difficult to create useable masks and cutouts. In effect, you are limited to cropping, adjusting basic attributes such as brightness, contrast, color depth, and so on, and applying some basic filters.

The program does handle some chores very well. It supports more than 40 file types, including FlashPix (FPX), PNG, EXIF, and animated GIF. Additionally, the program supports scripts and batch conversions. Riptide's interactive JPEG save dialog is particularly good—you can see the effect of various compression levels before saving the file.

Other utilities include a slideshow with more than 100 transition effects, a Windows wallpaper creator, and a GIF animation player. The program comes with a skimpy collection of clip media—fewer than two dozen images repeated in two formats.

The program certainly won't tax your system like some other image editors, but it won't bring you the level of creativity that you should expect, either.

The company is working on a new image editor, PhotoZone Advanced Photo Studio. Hopefully this app will address some of deficiencies in Riptide. PCGV

J.V. Bolkan is a senior contributing editor to *PC Graphics & Video* magazine. He can be reached at jvbolkan@aol.com.

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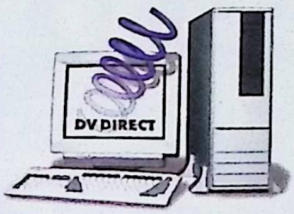

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THE EXPERTS TEST AND REPORT ON GRAPHICS AND VIDEO SOFTWARE AND HARDWARE

REVIEWS

- formZ Renderzone
- Canvas 5
- QuarkXPress 4.0

A Model for 3D Excellence

by J. Scott Hamlin

FORMZ RENDERZONE 2.9.5

As 3D continues to pervade media in Hollywood, broadcast television, and even in increasingly sophisticated Web applications, the need for more realism and style grows at a relentless pace. The ante is being raised and 3D modelers are under mounting pressure to deliver models that only a few years ago would have been implausible. Fortunately, an increasing number of modelers know that there is one tool where the inconceivable has precious little foothold: auto•des•sys' formZ RenderZone.

FormZ, now in version 2.9.5, serves up a hearty load of powerful new features and user interface enhancements such as organic modeling, multiple undos, and customizable key commands.

Conceive It, Model It

True to its roots, most of the features new to formZ augment its already formidable array of modeling tools. Probably the most compelling of the new modeling features is formZ's Metaformz. Basically a highly advanced application of metaballs, Metaformz applies the fundamental concept of giving parametric objects the ability to blend smoothly together when they overlap. However, while the standard metaballs feature found in many 3D applications today is limited to spheres, Metaformz can be applied to any number of shapes, while retaining control of the shape's parameters.

Skinning and Smooth Mesh are also new to formZ. With Skinning, formZ applies multiple paths to source profiles to generate 3D models. There are two brands of Skinning in formZ—linear and "cross skinning." The linear approach simply applies the profiles to the prescribed paths whereas with cross skinning, the profile is interpolated along a series of closed paths.

FormZ 2.9.5 introduced a host of new organic modeling tools, including "Metaformz"—metaballs that are not limited to simple spheres.

Smooth Meshing is conceptually similar to the idea of skinning in that shapes can

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have an adjustable mesh skin applied to them. The mesh is curvature sensitive, making it easy to model a wheel from a thin cone or a ball from a cube. With this tool, rigid edges become smoothly rounded and you have control over the density of the mesh.

Version 2.9.5 also introduced the ability to model by displacement using grayscale images. This form of modeling is similar to bump mapping, except that rather than faking bumps and recesses with shading, an actual mesh is geometrically sculpted into shape using the shades of a grayscale map. 3D solids as well as projections are fair game for displacement, making it easy to model everything from a realistic dent in that juicy spaceship model to impressions in furniture.

Organic modeling has been vastly improved in formZ version 2.9.5. Architectural modelers will like the support for View Matching and an architectural perspective view called "straight up perspective."

View Matching blends new models into preexisting scenes and settings, while straight up perspective is an unnatural or constructed view that improves the modeler's ability to decipher or read buildings and structures as they work.

Most importantly, there is no longer a limit of 32,000 entities, so drafting projects, which can easily approach millions of objects, are now possible. It's also worth noting that formZ now supports 2D/3D digitizing with devices such as Immersions' MicroScribe-3D.

UI Improvements

What has set formZ apart from the competition is its depth in the fundamental modeling and UI arenas. For instance, formZ facilitates extended application of standard modeling methods, such as lathes and sweeps, with comprehensive UI controls and specialized dialogs, such as the Screw/Bolt Options dialog and the Spiral Stairs Options dialog.

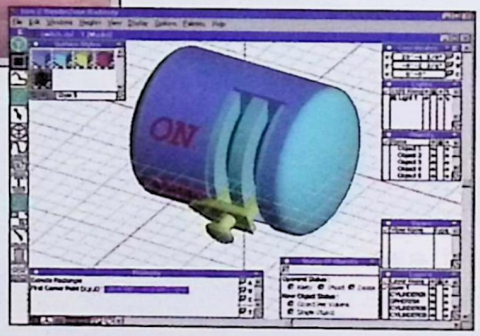
Most notable among these UI improvements is how the Pick tool works. New options include the ability to move, rotate, and resize objects with click and drag. You can also make the Pick tool work with the Shift-select method common in other desktop applications. Other important additions are the Pan (hand) tool and the use of auto scrolling.

Keyboard shortcuts are now fully customizable and all of the 500 plus commands in formZ are accessible via the shortcuts. You can execute multiple undos in a single step or you can turn off undo altogether. You can now also save undo records with a project and save partial copies of projects.

Rendering

Of course, the rendering portion of the 3D equation hasn't been neglected. Probably the most robust new rendering option is version 2.9.5's biggest contribution: Radiosity—called "Radiozity" by auto•des•sys. Radiosity is a realistic simulation of the distribution of light in a given environment. Radiosity solutions are view-independent, which means that once you generate a radiosity solution, you can produce as many renderings with it as you like without recalculating the light intensities.

At left: The most significant new feature in formZ 2.9.5 is Radiosity, which involves variable resolution meshes being applied to objects for more realistic lighting—particularly valuable for indoor scenes.



Above: Comprehensive OpenGL (Windows) and QD3D (Mac) support provides for extremely fast previews and dynamic manipulations even with advanced features such as formZ's new Radiosity-based renderings.

With other new RenderZone options, you can now generate mixed wireframe and shaded renderings (wireframes can even cast shadows). Procedurally generated sky backgrounds have been added with adjustable weather conditions. Depth-of-field blurring also can be rendered and the reflexivity of objects can be controlled with image maps. You can render transparent shading for such things as complex glass renderings and you can project lights through bitmaps to create gel effects.

Also, you can view and render panoramas with formZ. This is particularly nice for QuickTime VR movies generated and viewed with formZ. VRML 2.0, DWG Lightscape, and PNG file formats are newly supported.

Conclusion

Downsides to formZ, such as a long learning curve and a lack of animation, are to be expected. While the documentation is outstanding, there is no way to get around the one to two weeks of solid time it takes to fully orient yourself with the program.

Some may consider formZ to be pricey, but auto•des•sys allows you to pay only for what you need (you can purchase just the modeler or the modeler with the renderer).

FormZ RenderZone is one of those programs that make the cliché "the best just got better" legitimate.

Its status as the supreme modeling application has been resoundingly amplified in the 2.9 and 2.9.5 incremental upgrades.

Whether you need to model and render intricate architecture, elaborate organic otherworldy beasts, or fanciful sci fi scenes, formZ has the tools that can help turn virtually any idea into virtual reality. PCGV

J. Scott Hamlin (www.eyeland.com) is a partner/producer of Pure Imagination, Inc. He is the author *Designing with Animation* from O'Reilly Press and *Photoshop Web Techniques* with New Riders Press.

SUMMARY

formZ Renderzone
Auto•des•sys
2011 Riverside Dr.
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www.formz.com
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Powerful organic modeling adds to dominant array of modeling tools. Excellent new rendering options including radiosity, depth-of-field, and reflexivity maps. It lacks animation and has a steep learning curve.

Rating: 9/10

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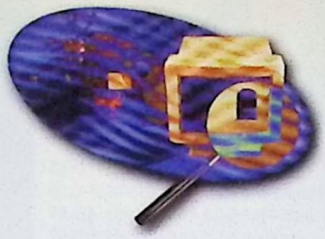

CANVAS 5

Three Apps in One

by J. Scott Hamlin

The level of sophistication reached by desktop illustration tools long ago forced software vendors to extend their applications beyond the realm of the vector. Like Corel, Adobe, and Macromedia, Deneba has joined the trend of expanding the capabilities of its vector-based application. However, Deneba has pushed this concept further by integrating more comprehensive bitmap and layout capabilities in Canvas 5. While many of its multi-discipline tools within the application exceed the competition, Canvas 5 falls short of industry leaders in all of the categories (vector, bitmap, and layout) on an individual basis and the all-in-one approach is not without its shortcomings.

Drawing

It's not hard to see that Canvas has its roots in vector-based illustration, particularly when you look at the program's strong vector effects tools, which include effects for distorting shapes, enveloping effects, and extruding.

Canvas features a particularly strong vector-based extrusion tool that is capable of lathes and sweeps on both open and closed shapes.

Probably the most robust vector effect in Canvas is the Extrude effect. This feature isn't limited to mere sweeps, as in competing applications. Rather, it enables you to generate lathe effects called "circular sweeps." Circular sweeps can be applied to open or closed objects with anywhere from 10- to 360-degree rotations, but you cannot apply circular sweeps to text objects.

The Extrude dialog allows you to specify only a single colored light source, but you can numerically position it relative to the extruded object.

Canvas also sports a vector masking tool reminiscent of CorelDRAW's editable PowerClips feature. Mask allows you to place objects inside of vector-based object containers. The objects placed inside of these containers remain accessible. If you need to edit imagery inside of masks, you can select "Release Mask," make your edits, and then put the contents back inside of your mask. However, unlike CorelDRAW's PowerClips, Masks lose their color and line properties.

Canvas features an impressive set of drawing tools, such as excellent dimensioning tools, "Smartlines" (useful for illustrating flowcharts), and Boolean operations. Boolean operations such as Intersect, Subtract Front, Subtract Back, and Slice each are accompanied by clear (yet uninspiring) visual representations of their effects in the compact, awkwardly named "Combine" effects dialog. You also can mix the colors or apply transparency to overlapping objects (although you are limited to objects with solid colors).

Basic point and Bezier curve editing in Canvas falls short of industry leader CorelDRAW.

For instance, while the pointer tool doubles as a point edit tool and you can edit segments of a path by clicking and dragging, you can't align points, tab between points, or nudge Bezier control points as you can in CorelDRAW and there is no equivalent to the comprehensive context-sensitive point or node editing tools found in competing vector-based applications. However, common point operations such as break apart and join can be accessed by right clicking on a point, which produces a context sensitive pop-up menu.

A minor disappointment is the lack of absolute alignment. Like Illustrator and FreeHand, Canvas aligns using relative alignment. For instance, centering an object to another object repositions both objects. However, Canvas supports object locking, so you can lock an object and then center something else to the locked object.

SUMMARY

Canvas 5
Deneba Software
7400 S.W. 87th Ave. Miami, FL 33173
(303) 596-5644 • $599
www.deneba.com
Circle & Web #198

PCG&V 1998 RECOMMENDED

Fast and reliable text handling. Colada 2 add-on provides excellent interactive Java-based Web delivery mechanism. The illustration tools fall short of the competition, and there is no layering for bitmap editing.

Rating: 7/10

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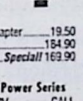

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Painting

Compared to other vector-based tools, Canvas is unparalleled in the realm of built-in bitmap editing (although CorelDRAW comes with a bitmap editing tool, Corel Photo-Paint, which exceeds Canvas' internal photo-manipulation capabilities).

Clicking on the Paint Object Creator tool on the main toolbar produces an array of bitmap editing tools remarkably similar to those found in Adobe Photoshop. These tools can be floated separately from the main toolbar for easier access.

You can create a bitmap object either by dragging to define an area or by importing a bitmap image. Like all objects in Canvas, you enter "edit mode" by double-clicking the bitmap image or area and exit by double-clicking outside of the object. Editing a bitmap doesn't mean going into a separate program. You edit the bitmap within Canvas with any vector and text objects still visible.

Because of this unique approach to bitmap editing, Canvas provides several nice ways to control the bitmap's canvas size. You can crop with the cropping tool, you can size the canvas numerically via the Image Crop dialog, or you can size the Canvas by going out of Edit mode and holding down the Alt key while sizing with the Crop tool. You can have multiple bitmap images in a document, which means that you can have any number of editable bitmap images in a layout.

All of the fundamental tools are here: Dodge, Burn, Clone, Smudge, Airbrush, and so on. There are also a few surprises. For example, the neon tool allows you to paint on neon effects using the foreground and background colors. Also, the gradient tool is more interactive, allowing you to adjust the gradient by holding down the mouse and repositioning it until you achieve the effect you desire.

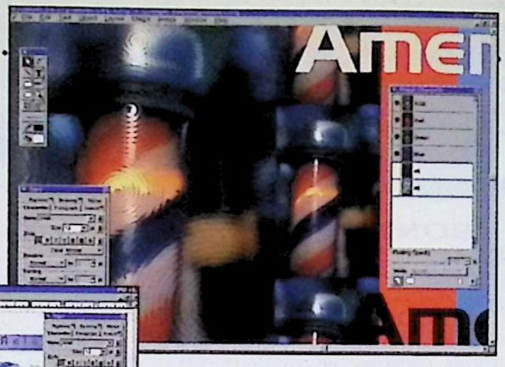
Canvas lacks the range of special effects and artistic effects filters found in Photoshop and Corel Photo-Paint. It can use Photoshop-compatible third-party filters, but you can't select a folder of filters. You must select a specific filter. Canvas isn't very graceful about dealing with unsupported filters, such as Filter Factory plug-in filters. Selecting an unsupported filter results in Canvas consistently crashing while it's opening, forcing you to reinstall the program in order to fix the problem.

Easily the most limiting aspect of Canvas' bitmap editing capabilities is the lack of layering. Much like Photoshop version 2.5, you are limited to temporary floating selections. This restriction alone relegates Canvas' bitmap editing tools to a low- to mid-range capability, since many bitmap editing requirements are far too tedious to implement without layering. Canvas features layering for objects (to position text over a graphic, for instance) but this can't be used to emulate the power of bitmap layering. Bitmap objects in Canvas are always fully opaque so you cannot layer one atop the other for combined effects and editing.

Layout

One of the more impressive aspects of Canvas is its text handling capabilities. Unlike competing illustration programs, Canvas handles large text blocks with the ease and speed you may be accustomed to in programs such as PageMaker.

On the other hand, the ability to wrap text around objects and add headers, footers, and columns is no match for a dedicated layout program such as Adobe PageMaker, QuarkXPress, or even Microsoft Publisher.



Above: A strong internal bitmap editing component in Canvas allows you to manipulate your images independent of other fully editable objects, such as text. **At left:** Canvas offers tools for manipulating vector-based images, bitmaps, and text.

Deneba also claims Canvas to be a good presentation layout tool, but in practice its presentation capabilities are dubious. While you can generate timed presentations complete with transitions between slides, there's no support for interactivity and there is no outliner or slide sorter. Consequently, presentations are a slide-by-slide proposition.

For the Web, there are no HTML import and export features, but Deneba has recently released Colada 2.0, a free add-on for Canvas 5. With Colada 2.0 you can create Java-based interactive buttons, animation, and sound (Java is limited to playing 8-bit audio files). In addition, Colada supports Canvas' resolution-independent imagery, which allows you to zoom and pan imagery in the Java applets without image quality loss.

Other Colada features include the capability to add keyword-searchable text and the capability to bypass the layout and font limitations of standard HTML. Since Java is employed, no plug-in is required, but Colada's applets are subject to Java's typical doggy performance—particularly those that contain vector-based images with any degree of complexity. Nevertheless, Colada is one of the more compelling aspects of Canvas 5.

Conclusion

Canvas 5 is a great tool for the intermediate-level designer who doesn't want to be continually jumping between multiple applications during the design process.

Canvas is exceeded by the industry leaders in the vector, bitmap, layout, and presentation realms, even if there are some innovations here and there, most notably Colada 2.0. The program is reasonably intuitive, but with so many built-in disciplines, the lack of solid documentation stands out. There are good online tutorials on Deneba's Web site and the company has just released a separate video training series.

At $599, Canvas is priced as a professional tool. While the inclusion of solid vector, bitmap, and layout tools in addition to 20,000 pieces of clipart and 2,000 fonts might partially justify that price point, there are better values on the market PCGV

J. Scott Hamlin (www.eyeland.com) is a partner/producer of Pure Imagination, Inc. In Round Rock, TX.

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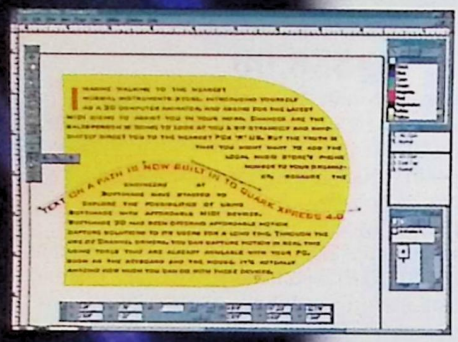
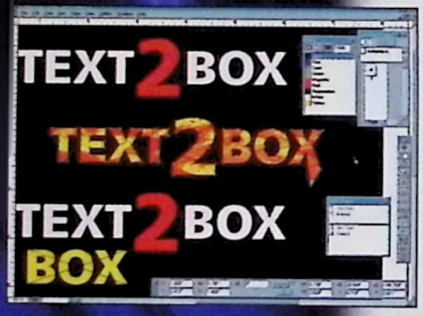
XPRESS 4.0

Quark's Long-Awaited Update

by Jacqui Summers

Top: Quark's new bezier drawing tools are accompanied by a number of merge commands. **Middle:** In 4.0, text and image boxes can be created and edited with bezier tools, and you no longer have to jump to an illustration program to flow text along a path.





Above: The Text-to-Box command creates outlines from type, allowing it to be used as a container.

As a designer who has used the various incarnations of QuarkXPress for most of the past 10 years, it's difficult to step back from this workhorse tool and judge it objectively. The program and I have come to a point where we understand each other's strengths and weaknesses and we work in a rhythm, the tempo of which has increased with experience. It is reassuring to have one tool that, though not perfect, I have had the time to thoroughly learn and to depend on its strengths.

Quark has gambled on this kind of user perspective for years. It's work on XPress 4.0 does not belie this. With the exception of a few standout new features, the four years since the last update have been spent on subtle improvements that will make professional print designers' work easier and more efficient, but will not drastically change the way they work.

Familiar Territory

The interface and work flow in 4.0 are not greatly changed. Several groups of requesters have been combined into tabbed dialog boxes. For example, you can jump back and forth between Modify Box, Text, Runaround, and Frame options. This is largely a welcome blessing, but in some cases, the need for a uniform box size results in an intrusive dialog (when setting tabs, for instance). Text and image boxes are interchangeable while text and graphics will import when either the content or item tool is selected. The content tool now selects items and group selects with a marquee.

Bezier Bonanza

The most dramatic addition to 4.0 is the ability to create freehand shapes with Bezier curves. This feature adds much of the functionality of an illustration program. Bezier shapes can contain either text or graphics and text can be flowed along an editable path. Merge options like union and difference simplify complex object creation.

An especially unique addition to the toolset is the text-to-Bezier box conversion, allowing image masking within a string of type, as well as unique type effects. Also useful is the customization of dashes and stripes for paths and frames according to size, shape, interval, and the color of the negative space.

Greatly improved clipping path support and control includes generation of Quark-editable Bezier-controlled clipping paths from imported EPS and TIFF graphics. Text wrap options are adjusted in the same dialog as clipping paths and can be based on them. Text will now flow on all sides of an embedded graphic.

Style Changes

Character style sheets are a long-awaited addition, with their automation of type styling on a word-by-word rather than paragraph-only basis. This is especially useful for drop caps, subheads, and graphic emphasis. New print styles, created for specific jobs and printers, can be shared across documents while the print dialog has been revamped with tabbed palettes and an output preview.

As a nod to the corporate market, and to catch up to the feature set of other layout programs, Quark has improved its built-in long-document handling. A new book file gathers separate documents as chapters, allowing style consistency, indexing, and TOC generation across multiple files.

What's Missing

Surprisingly, Quark has made no attempt to build support for Web publishing into version 4.0. You will need a third-party Xtension, like Extensis' BeyondPress, to repurpose Quark content. There is also still no built-in Table Editor but unlike the previous limitation of 20, you can create unlimited tabs. Existing Windows Xtensions will not work with 4.0 so you will have to wait for rewrites.

Do I Buy It?

You can count on the eventual ubiquity of QuarkXPress 4.0 in design studios and output centers. Until that time, the ability to save files in version 3.3 format will be appreciated, although you will have to be careful not to use 4.0-specific features. This is not a must-have upgrade but it offers enough increased efficiency and new features to mean you will want to stay current. PCGV

Jacqui Summers is senior editor of *PC Graphics & Video*. She can be reached at jsummers@pcgv.com.

SUMMARY

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Bezier path shapes and lines add illustration power while long-document handling and character style sheets are welcome efficiency boosters. The lack of built-in Web connectivity is surprising. Third party Xtensions will have to be rewritten.

Rating: 8/10

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Circle & Web # 239

POWER PLATFORMS

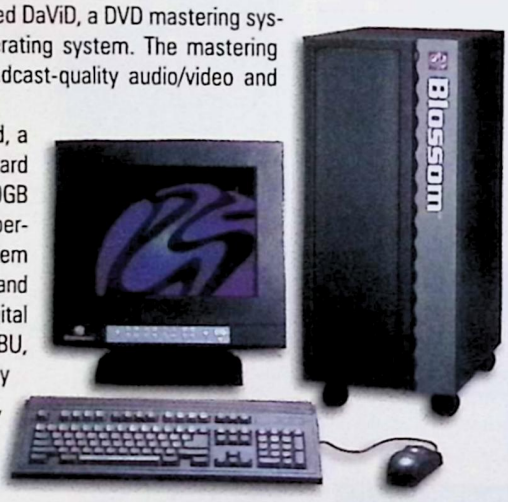
edited by John B. Virata

System updates

- Blossom Technologies' DaViD
- IBM Aptiva E76
- Toshiba Equium
- Xert Computing Firefly

BLOSSOM'S DVD MASTERING SYSTEM
Running Under Windows NT

Blossom Technologies Corp. has released DaViD, a DVD mastering system that runs under the NT 4.0 operating system. The mastering system enables you to encode broadcast-quality audio/video and master to DLTs and DVD writers.



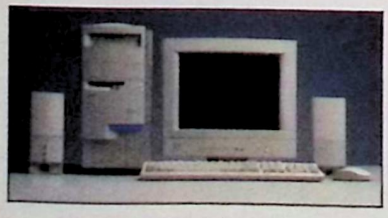
It features a dual Pentium II motherboard, a built-in high-capacity DLT unit, an on-board DVD playback system, 256MB RAM, and 20GB hard disk space. DVD-MPEG 2 encoding is performed via a real-time PCI encoder subsystem that offers composite, component, S-Video, and D1 video input. It includes analog and digital audio inputs (balanced, unbalanced, AES/EBU, and S/PDIF). It features two-channel Dolby Digital (AC-3) with sampling rates of 32, 44.1, and 48kHz. DaViD is priced starting at $59,000.

An optional non-linear editing subsystem is available for $19,999. It features an Adobe Premiere 5.0 front end, sound editing software, 3D animation software, 18GB hard disk storage, and an MJPEG video capture card. An optional DVD recorder for creating one-offs is available for $22,200.

Contact Blossom Video Technologies, 5555 W. Flagler St., Miami, FL 33134, (800) 378-3057, www.blossomvideo.com.

Circle 6 Web #188

IBM Releases Pentium II-Powered Aptiva E76



IBM has released the Aptiva E76, the company's first model in its Aptiva E series that harnesses the power of the Intel Pentium II processor.

The system features a 300MHz Pentium II processor with 512K L2 cache, 64MB RAM, 8GB hard drive, 24X CD-ROM drive, K56 Flex modem, ATI Rage Pro 3D graphics adapter with 4MB SGRAM and Direct3D, SRS 3D surround sound, and speakers. It ships with three PCI slots, and one shared PCI/ISA slot, two USB slots, and two 5.25-inch drive bays. Windows 95 comes pre-installed as does Lotus SmartSuite. It is priced starting at $1,799 and ships with a one-year warranty. Contact IBM, 3039 Cornwallis Dr., Bldg. 203, Research Triangle Park, NC, 27709, (800) 426-2968, www.pc.ibm.com/aptiva.

Circle 6 Web #189

Microsoft Pushes New PC Hardware Standard

by Ron Eggers

There's some confusion about the new PC 98 system design standards co-developed by Microsoft and Intel. Are they specifications, guidelines, or just recommendations? Are they a way of abandoning legacy hardware and software? Do they mean the death of ISA devices? Should purchases be delayed until PC 98-compliant systems become available? Do they have widespread industry support?

Even though information about the PC 98 guidelines has been available for some time, there really hasn't been much publicity about it.

According to some sources in the industry, there are two primary reasons for that.

For one thing, companies are reluctant to discuss the new guidelines for fear that publicity about them will drive sales of existing systems down, as buyers wait for the new technology. For another, because it is being driven by two of the biggest players in the computer industry, the companies don't want to give the impression that they're dictating terms.

The lack of discussion about the new standards is adding to the confusion. The most common misconception is that the PC 98 documents are specifications. They aren't. According to Dan Russell, Intel's director of platform marketing, they are guidelines developed to ensure a high level of compatibility as systems become more diverse and more complex.

The guidelines detail configuration suggestions for various types of systems, such as consumer-targeted computers, graphics workstations, entertainment-oriented systems and mobile PCs.

As has always been the case, system manufacturers are not obligated to comply with these recommendations. But those that do can be certified as such, ensuring the broadest level of compatibility at the highest level of performance possible and qualifying for Microsoft's "Designed for Windows" logo. →

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NEC Enters Windows NT Market

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The systems are dual-processor ready and ship with 64MB RAM, 512K cache, your choice of AccelStar II or AccelEclipse II graphics adapters, 6.4GB to 8.4GB IDE hard drives or 4.5GB to 9.1GB Ultra Wide SCSI hard drives, 3Com 3C905-TX-W 10/100 Ethernet adapter with Wake-on-LAN support, 24X IDE CD-ROM, three PCI, three ISA, and a shared PCI/ISA slot, Windows NT 4.0, and a variety of system enhancement utilities, including McAfee Virus Scan, Hummingbird's NFS Maestro and Exceed, and Cybermedia First Aid 97. Pricing ranges from $2,499 to $5,999.

Contact NEC Computer Systems Division, Packard Bell NEC, Inc., 339 N. Bernardo Ave., Mountain View, CA 94043, (888) 863-2669, www.nec.com.

Circle 6 Web #192

Toshiba Ships Equium 7000 Family of Pentium II Desktop Systems

Toshiba America Information Systems has released the Equium 7000 series of PCs for the corporate desktop. The systems are based on the Intel NLX motherboard and Pentium II processor. The build-to-order systems offer a variety of options, including your choice of 233MHz up to 300MHz processors, five drive bays, four expansion slots (three PCI and one shared PCI/ISA), 512K L2 cache, up to 256MB SDRAM, integrated ATI 3D Rage Pro AGP graphics adapter with up to 6MB SGRAM (on 7000D series with 440LX motherboard).

The systems also feature Secure Sleep with Instant On, Wake-on-LAN, ACPI, DMI 2.0, and Intel's LANDesk Client Manager.

Pricing starts at $1,229. Contact Toshiba America Information Systems, 9740 Irvine Blvd., Irvine, CA 92618 (800) 457-7777, http://computers.toshiba.com.

Circle 6 Web #191

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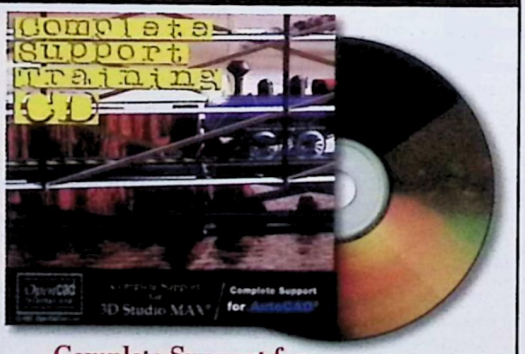

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XERT'S FIREFLY GRAPHICS SYSTEM

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Xert Computing has released the Fire-fly, a 3D graphics workstation based on dual 333MHz Pentium II processors.

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Contact Xert Computing, 26A Hamilton Dr., Novato, CA 94949, (888) 611-9378, www.xert.com.

Circle & Web #190

Power Path

CONTINUED

At the base level, the guidelines aren't a radical departure from current specs.

For example, in the 97 specs, the base configuration included a 120MHz CPU. For the 98 guidelines, the minimum has gone up to 200MHz.

Because the guidelines are incremental, Russell advised potential system buyers to make their purchases without specifically waiting for systems that have been designated as PC 98-compliant to come onto the market. "There are already any number of systems shipping today that meet or exceed the baseline guidelines of PC 98," said Russell "For example, the majority of the 300MHz Pentium systems being marketed already exceed the guidelines."

The guidelines still support ISA slots for some systems, but both Microsoft and Intel recommend that manufacturers don't include them.

The Entertainment PC 98 guidelines recommend no user-accessible ISA slots. The IEEE 1394 port has been specified as a recommended feature.

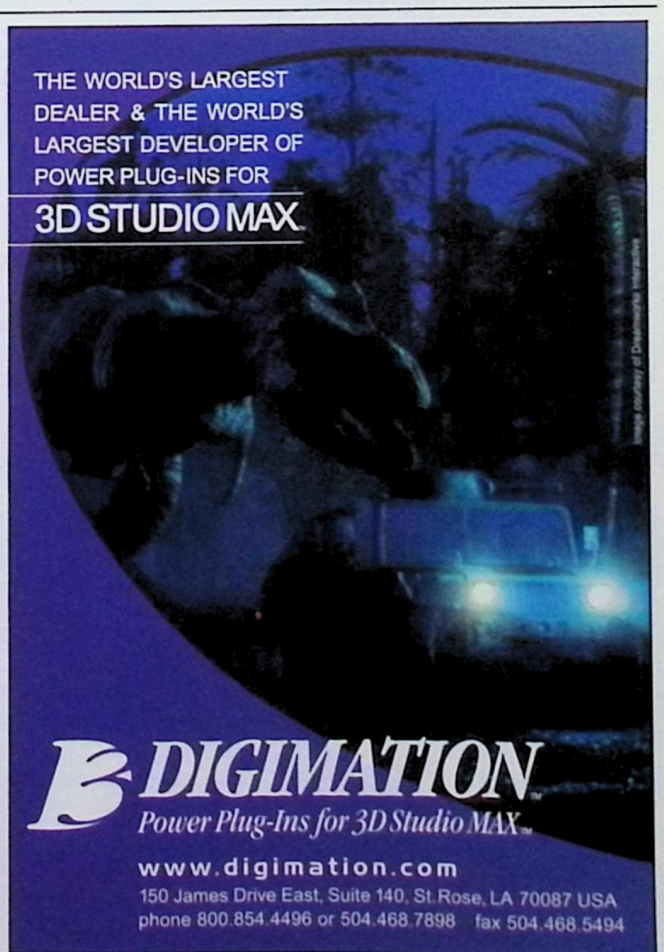
System manufacturers have the option to choose the capabilities they want to include in their products. What PC 98 does do, though, is provide the specs that ensure that when those features are implemented, they work the way they should.

Most of the PC 98 guidelines become effective July 1. There are, however, some provisions, such as those dealing with ISA, that go into effect Jan. 1, 1999. And there are other provisions, such as the USB implementation, that aren't effective until July 1, 1999. That means, during the last half of 1998 and part of 1999, systems can be advertised as meeting the PC 98 guideline without actually meeting all the requirements.

Virtually every major system manufacturer has indicated support for the guidelines.

Ron Eggers is a senior editor with NewsWatch Feature Service. He can be reached by email at 71210.3556@compuserve.com.

Circle & Web #231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Circle & Web #232

IN FOCUS

edited by John B. Virata

Digital cameras and peripherals

- Olympus ships D-340L
- "How To Take Great Pictures"
- DV camcorder by Canon
- Fuji releases MX-700
- Your Eye's on It: Get Serious

OLYMPUS RELEASES D-340L

With 1280 x 960 Resolution, Tele/Wide Mode

Olympus America has released the D-340L digital camera, its latest addition to the D-300 series of digital cameras.

It offers 1280 x 960 resolutions and includes such features as tele/wide and sequence shooting modes.

The D-340L incorporates a 5.5mm all-glass aspherical f/2.8 autofocus lens, low compression ratios, and video-out capabilities for viewing your photographs on a TV set.

Other features include a 2-inch LCD screen, macro capabilities to as close as four inches, and 2X telephoto mode.

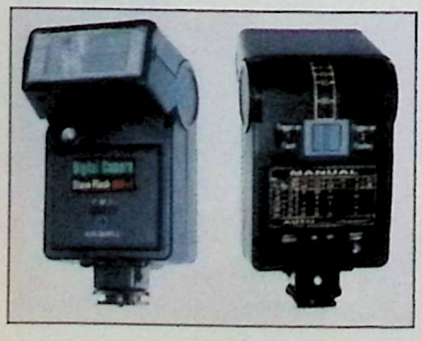
The camera's sequence shooting mode enables you to shoot and capture up to 10 images in half-second intervals.

It captures images in three resolutions: 640 x 480 standard, 1280 x 960 high quality, and 1280 x 960 super high quality.

It ships with 4AA alkaline batteries, a 4MB panorama SmartMedia card, strap, serial cable, video connection cable for TV/VCR, Adobe PhotoDeluxe, InMedia Slides & Sound, panorama image stitching software, Olympus camera utility software, TWAIN acquire drivers for the PC, and an instruction manual. It is priced at $799. Contact Olympus America, Digital & Imaging Systems Group, Two Corporate Center Dr., Melville, NY 11747, (800) 347-4027, www.olympus.com/digital.

Circle 6 Web #183

S/R, Inc.'s Slave Flash for Digital Cameras



S/R, Inc. has released a slave flash designed specifically to work with digital cameras. Called the DSF-1, the flash can be set to fire on the first or second flash, enabling you to use flash with a digital camera, which captures the image on the second flash. It features built-in slave circuitry, and doesn't need to be attached to the digital camera. It is priced at $89.95.

Contact S/R, Inc., P.O. Box 166055, Irving, TX 75016, (800) 324-7745, www.cyberramp.net/~srx/flash.htm.

Circle 6 Web #184

FREE GUIDE TO BETTER PHOTOGRAPHY

Booklet Offers Tips to Get Great Pictures

The Photography Information Council is shipping "How To Take Great Pictures," a free guide that offers picture-taking tips to help you acquire the best photographs possible with traditional SLR as well as digital cameras.

The four-color, 24-page booklet offers tips about the difference in film speeds, and how to capture all your special moments during the holidays, vacations, and everyday.

The booklet also discusses digital imaging and computers and how to use digital cameras with imaging software.

The free booklet can be obtained by contacting The Photography Information Council at PMDA, Attn. PIC, 1120 Avenue of the Americas, 4th Floor, New York, NY 10036, (800) 599-5929, www.photoinformation.org.

Circle 6 Web #185

Canon's Ultra Compact ZR Digital Video Camcorder

Canon USA has released the ZR Digital Video Camcorder, an ultra-compact DV camera that has the look of a point-and-shoot camera.

It records to standard MiniDV cassettes, using a 1/4-inch interlace scan CCD, and can download video to a PC via an IEEE 1394 port.

Features include an 11X Canon Optical Zoom Lens (3.9 to 42.9mm f/1.8), a 44X digital zoom lens and two recording modes: Movie mode for shooting full-motion video, and Photo mode for capturing digital still images. Photo mode records a single image with about six seconds of audio, so you can record a voice annotation. Other features include programmed auto exposure, a 2.5-inch LCD screen with 180,000 pixels, a Finder unit that attaches to the LCD screen, converting the LCD into an eyecup-type viewfinder, 12-bit and 16-bit stereo sound, manual controls for focus exposure and white balance, shutter speeds from 1/60 to 1/8000 second, a self timer, and an integrated AV output terminal.

It ships with a remote control, charge coupler, compact power adapter/dual battery charger, lithium ion battery pack, docking unit, stereo video cables, S-Video cable, shoulder strap, and a MiniDV cassette. The ZR is priced at $1,999. Contact Canon USA, One Canon Plaza, Lake Success, NY 11042, (800) 652-2666,www. canondv.com.

Circle 6 Web #186

FUJIFILM MX-700 CAMERA

Fuji Photo Film has released the MX-700 digital camera, a 1.5 million-pixel digital camera built around a .556 CCD that can capture a maximum resolution of 1280 x 1024.

Features include a 2-inch LCD monitor, four flash modes, (on, off, auto, and red-eye reduction), five white balance settings, and a macro mode that can capture images as close as 3 1/2 inches. It captures standard JPEG images in about five seconds in Fujifilm's Exif file format on SmartMedia removable storage cards. The camera also can be connected to a TV screen where it can display the images.

An optional SmartMedia floppy disk adapter enables you to transfer the image files via floppy disk. It comes bundled with Adobe PhotoDeluxe 2.0 image editing software, AC adapter, serial cables, and data transfer software. It is priced at $799.

Contact Fuji Photo Film USA, 555 Taxter Rd., Elmsford, NY 10523, (800) 378-3854, www.fujifilm.com.

Circle 6 Web #187

The Megapixel Market Gets Serious

by Don Sutherland

In the 35mm professional market, Canon and Nikon are two brands seriously identified with "serious" performance. No gasps of surprise, then, if their next-generation digicams try to bring something "serious" (as well as new) to the field. In the Canon PowerShot Pro 70 and the Nikon CoolPix 900 we find CCDs making pictures more than one megapixel in size, plus features and refinements that aim them at the "serious" photographer. But are we all in agreement on just what this photographer needs?

Apart from their high-level positioning, the two cameras are considerably different. The Canon (judging from a mock-up I handled at Comdex) resembles a traditional, compact SLR (though it does not have an optical reflex viewfinder), whereas the Nikon is harmonica-flat and horizontal. The Canon prototype had an LCD monitor on a hinged, swing-out panel, permitting the screen to face any point within a 360-degree range of the lens.

The Nikon's body, meanwhile, is in two parts, articulated so the lens and flash can rotate 180 degrees relative to the LCD and controls. Both designs extend the range of positions and angles at which the cameras can be held (or mounted), while leaving their monitors in view.

Both cameras are fitted with zoom lenses and coupled optical viewfinders. In the case of the CoolPix, it's a 3:1, 5.8 to 17mm ("equivalent" to a 38 to 115mm lens on a 35mm SLR) f/2.4-3.6 Nikkor; for the PowerShot Pro, it's a 2.5:1 zoom with a range that is the "equivalent" of a 28 to 70mm on a 35 and whose maximum aperture is f/2.0-2.4. The Pro 70 has an ISO equivalency of 100; the CoolPix 70 is better than half that, at ISO 64.

None of the digicams in their price range, if judged by film-camera standards, would be called "serious," although some come close.

The minimum standards for a "serious" camera include interchangeable lenses, external flash sync, and full manual overrides for autoexposure and autofocus. Anything less might become something a "serious" photographer could use, but not a "serious" camera.

The new PowerShot and CoolPix go all the way to professional level in only one respect: their pricing. Expected to sell for about $1,500 and $900, respectively, they're pricey for SLR film cameras, although bargains compared to high-end digicams of a year ago. And each takes a step in the direction of becoming a "serious" camera that hasn't been taken in their field before.

The Canon has a hot-shoe contact for external flash, compatible with its EOS 220EX and 380EX speedlights. These are essential whenever darkness reaches beyond the 10 feet or so that most on-camera speedlights can cover. The PowerShot has two memory card slots for extra capacity.

The Nikon takes screw-in adapter lenses. Two that were shown behind closed doors are a wide-angle adapter and a 180-degree fisheye adapter. The CoolPix 900 also includes a Matrix metering pattern for the autoexposure, plus spot and standard center-weighted, the better to adapt the AE to traits of the scene.

The CoolPix outputs an image of 1280 x 960 pixels; the PowerShot Pro bumps up the ante to 1.6Mp, for a new high in this class of 1563 x 1024 pixels. These are, of course, resolutions high enough for a camera to fulfill "serious" needs.

I tested a prototype of the CoolPix back in February. I wanted to see how its sheer picture quality compared to another's (a camera with similar specs and a reputation for one of the best-quality pictures on the digicam market).

I'd say the CoolPix performed slightly better, probably because its Matrix meter balanced exposures more evenly in scenes of highlighting contrast. I've been describing the "Megapixel Parade" here for several months.

With the arrival of these new models, the marching continues . . .

Contributing editor Don Sutherland operates Sutherland Multimedia (Staten Island, NY). He is the author of several books and has been writing about imaging since 1967.

SOUNDSCAPE

Audio technology and news

- SmartSound For Multimedia 1.5
- Cakewalk Music Software's Cakewalk Audio FX 1 plug-in set
- Sound Waves: The Watchmen go CD-Active
- VideoLogic Apocalypse 3D

edited by Amy Woods

SOUND CARD BASED ON AUREAL TECHNOLOGY

Montego 64-voice A3DXstream

Turtle Beach Systems' next-generation sound card, the Montego A3DXstream, offers a 64-voice sound palette, a 92dB signal-to-noise ratio, and Aureal Semiconductor's A3D positional sound technology on a PCI-based accelerator, according to the company.

The card already has been tapped by Dell Computer Corp. for integration in the Dimension XPS D300 and D333 systems.

Based on the AU8820 digital audio processor, the Montego supports DirectSound and DirectSound 3D, and can accept wavetable and S/PDIF expansion cards, the company said. The retail version has a list price of $129.

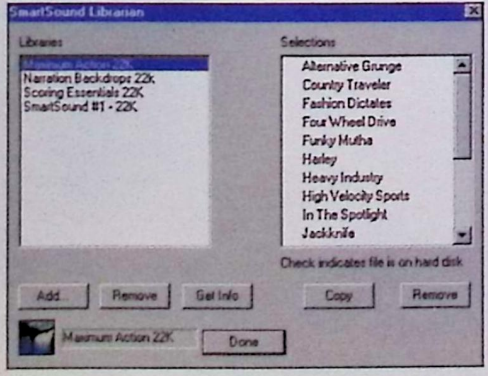
For more information about the A3DXstream, contact Turtle Beach Systems, Five Odell Plaza, Yonkers, NY 10701, (800) 233-9377, www.tbeach.com.

Circle 6 Web #171

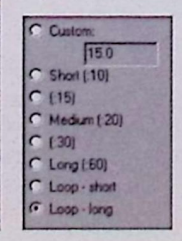
Sonic Desktop's Soundtrack Editor Gets Update

SmartSound For Multimedia 1.5, a multipurpose soundtrack creation tool aimed at both professional and novice audio editors, includes added features that enhance and broaden the application of the two-year-old product, the company said.

One of the features is loopable soundtrack creation, which can be useful on Web pages when you don't know how long a soundtrack has to play. Version 1.5 also offers RealAudio support and support for WAV, AIFF, and AU files.



Support for 44.1kHz, 16-bit stereo has been incorporated for video and broadcast uses. There also is a Randomize feature that enables you to use different arrangements each time the Maestro tool is selected. The list price is $259; upgrades are $35.



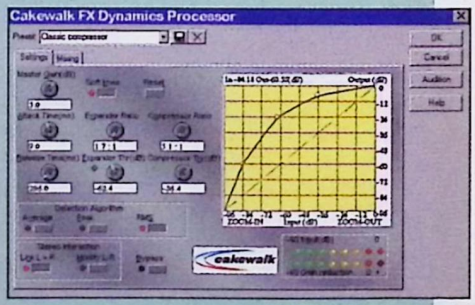
Contact Sonic Desktop Software, Inc., P.O. Box 3205, Chatsworth, CA 91313, (800) 454-1900, www.smartsound.com.

Circle 6 Web #172

DIRECTX-COMPATIBLE PLUG-IN SET SHIPS FROM CAKEWALK

Cakewalk Music Software's dynamic processing plug-ins give audio editors the power of professional-level, hardware-based mixing effects in a DirectX-compatible software program, according to the company.

The program, Cakewalk Audio FX 1, offers a set of four plug-ins including Compressor/Gate, Expander/Gate, Limiter, and the Dynamics Processor.



Compressor/Gate keeps audio signals from getting too loud or too soft by smoothing out and tightening the dynamic range, the company said, while Expander/Gate does the opposite, making the loud parts louder and the quiet parts quieter. The Limiter prevents audio signals from exceeding user-defined thresholds so that distortions are avoided in the final mix.

The Dynamics Processor is an all-in-one tool that integrates the Compressor, the Expander, and the Limiter in a single editing window. The list price is $149.

Contact Cakewalk Music Software, Five Cambridge Center, Cambridge, MA 02142, (617) 441-7870, www.cakewalk.com/Products/AudioFX.htm.

Circle 6 Web #173

VIDEOLOGIC RELEASES 2D/3D GRAPHICS ACCELERATOR CARD

3D Audio, Graphics on One Card

VideoLogic's Apocalypse5D Sonic card extends the graphics acceleration of the Apocalypse5D to include PCI-based audio acceleration.

The single-slot, plug-and-play card combines the PowerVR-based NEC PCX2 2D/3D graphics processor, Tseng Labs' ET6100 graphics controller, and the AGOGO-XP audio signal processor from ESS Technology.

The result is a 6MB card (an 8MB version

also is available) that ships with Midisoft Studio 4.0 Lite, AudioRack from ESS, and MixMan's 3-Mix.

The AGOGO-XP offers 64-channel processing of audio streams and a 64-voice General MIDI wavetable synthesizer, as well as 3D sound virtualization using QSound Labs' technology, the company said. It supports Microsoft's DirectSound and Aureal Semiconductor's A3D APIs. The list price is $299. System requirements are a 166MHz Pentium with 32MB RAM.

Contact VideoLogic, Home Park Estate, Kings Langley, Hertfordshire WD4 8LZ, United Kingdom, (44) 1923-260 511, www.videologic.com.

Circle 6 Web #174

Liquid Audio Ships Version 3

Liquid Audio's online music-streaming software has reached its third iteration, and all three components have been upgraded. The Liquid MusicServer now runs on Windows NT (in addition to Sun and SGI). The Liquifier Pro 3.0 mastering tool, which enables musicians to publish copy-protected tunes to the Web, now supports the Plextor Ultraplex 32X line of drives, the company said, and also has included batch-extraction presets. Liquid MusicPlayer 3.0 supports CD-RW drives from Philips and HP.

For pricing information, contact Liquid Audio, 810 Winslow St., Redwood City, CA 94063, (650) 549-2000, www.liquidaudio.com.

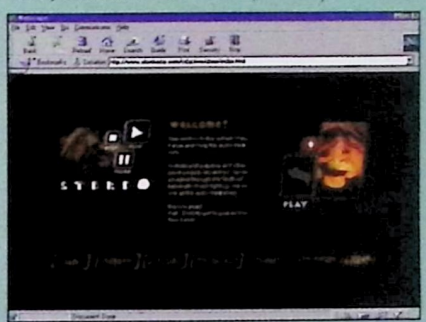
Circle 6 Web #175

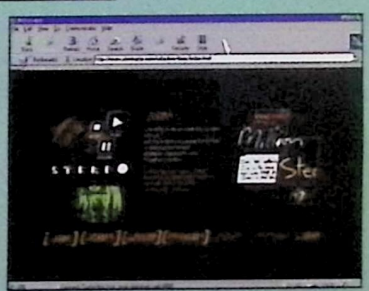
Digital Renaissance For The Watchmen

by Amy Woods

As Canadian rockers The Watchmen are taking their music, their fans, and their live performances into the 21st century.

Since the band got together in 1989, members Ken Tizzard, Sammy





The Watchmen offer email, Webcasts, chat rooms, and a home page to better communicate with its fans.

Kohn, Daniel Greaves, and Joey Serlin have ridden the waves of information technology to better communicate with their dedicated following.

Email, Webcasts, chat rooms, and a home page are as much a part of The Watchmen's repertoire as their three albums. But with the release of their fourth album, "Silent Radar," The Watchmen have embraced a new technology that until now has never been used.

"It's the first actual deployment of the technology," said Greg Rossetti of Digital Renaissance, the software company that developed the Temporal Annotation Generator CD Audio Editor.

Also called CD-Active, the technology enables dynamic multimedia files to be linked to CD audio tracks via the Web.

Here's how it works: When a user plays "Silent Radar" on a PC while logged on to the band's Web site, special data files are triggered that produce "pop-up" video clips, song lyrics, and images of the band.

The use of CD-Active will, as bassist Ken Tizzard said, "help our fans get a fuller experience from our new album and connect with us more easily."

Another CD-Active area on "Silent Radar" takes users to a fan club where they can post notes for the band, email fellow fans, and read messages others have left.

"This technology. . .it allows them to truly define how the fan perceives the band," Rossetti said. "The fan will almost be able to go on tour with the band."

T.A.G. technology is proprietary software originally developed for use on commercial Web sites, corporate intranets, and CD-ROMs. Earlier this year, Digital Renaissance extended the application to include audio CDs.

"The technology is available on a CD that was sold five years ago or on a CD that was sold five minutes ago," Rossetti said. All the user needs is the T.A.G. player, a free, downloadable utility that works with Microsoft's Internet Explorer and Netscape's Navigator. The developer needs the T.A.G. Editor.

"It's just a value-added thing," said Beth Waldman of EMI Music Canada, The Watchmen's label. "Fans are going to buy CDs because of the music on them; this is just a bonus and a nice bonus for those really serious fans."

Only the song "Stereo" has been "CD-Activated," but more tracks will be enhanced in the future, and data files linked to "Stereo" will be changed and updated, Waldman said.

"We have the ability to change it so it can be a different experience every time the fan logs on," she said.

Amy Woods is associate editor of *PC Graphics & Video*. She can be reached online at awoods@pcgv.com.

CYBER PUBLISHING

edited by Amy Woods

Image connectivity news, views, and information

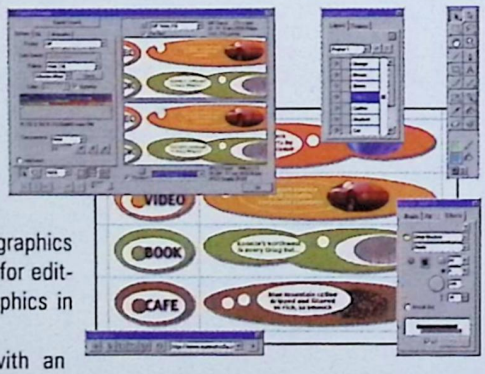
- Macromedia shows off suite of Web tools
- Cosmo PageFX uses VRML 2.0
- docSpace Direct available from Intrasect
- Web Worx: Give online, browser-based graphics services a try

FIREWORKS, FLASH 3, AND THE GENERATOR

Macromedia Continues Internet Onslaught

Macromedia has released an online public beta of its Web graphics production tool, Fireworks (www.getfireworks. com).

Continuing in the tradition of Flash and Dreamweaver, Fireworks is designed for professional Web developers. Besides streamlining Web graphics production within a unified environment—with GIF and JPEG optimization, Javascripting, batch processing, and GIF animation—the program also combines vector and bitmap graphics tools in one program for editing and updating graphics in real time.



Working closely with an advisory board of Web professionals, Macromedia developed the tool to address real-world needs, including in-program preview of different compression schemes, easy slicing and reassembly of large image maps, and automatic Javascripted button generation, as well as the capability to quickly make changes with Fireworks Live Effects.

Unlike traditional pixel-based filter effects, Live Effects features such as embosses, drop shadows, and bevels are properties linked to specific objects and will update automatically with the object. Brush strokes and objects with effects applied are editable with Bezier curve control.

Macromedia also announced an update for its vector-based animation authoring tool, Flash. Flash 3's new features include transparency, animated buttons and menus, shape morphing, stand-alone file projectors, bandwidth profiling, synchronized sound, custom fonts, and natural drawing tools. At the same time, Macromedia will open the Flash file format specification to third-party developers for free, with the aim of creating an Internet standard for vector graphics and animation.

Also announced was a server-based component called the Generator, which will enable on-the-fly creation and update of Web site graphics and graphic applications.

Designers will be able to create graphic templates in Flash 3 that are linked to data files served up by the Generator. Applications include constant update of headlines for news sites, hourly accurate icons on weather maps, and user-customized content for a variety of applications.

Fireworks will be available this summer for a $299 list price. The Flash 3 beta and the Flash file format are available online at www.flash.com. Flash 3 lists for $299.

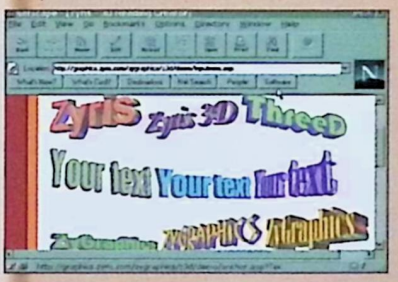
The free Generator beta also will be available this summer. Contact Macromedia, 600 Townsend, San Francisco, CA 94103, (415) 252-2000, www.macromedia.com.

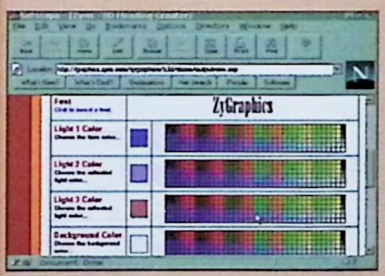
Circle 6 Web #196

Browser-Based Graphics Applications Make Like Software

by Sandy Lurins

One of the first "Web Worx" columns I wrote, more than two years ago, offered information on places you could go online to develop graphics interactively. Lately, I've discovered sites that offer you the ability to develop and optimize graphics via your browser—no software needed.





Top: Choose from a range of styles, including 3D text and animated text. **Above:** The menu choices for one style of 3D text include font, light colors, background color, image quality, and image size.

If you'd like to try your hand at browser-based graphics, give Zyris (www.zyris.com) a try. There's no charge and you can use the images you produce in any way you desire. You start by selecting the type of image you want: animated text, 3D text, or regular banner text. Each type of text comes in a variety of styles, and remember that when you choose a style you will be able to customize colors and font as well. Once you choose the desired attributes (main and highlight colors, background color, font, image quality, and image size) you submit the attribute to ZyGraphics, which then displays your graphic. You can make adjustments to the attributes until you are satisfied. Simply right-click on the image to save it to your hard disk. →

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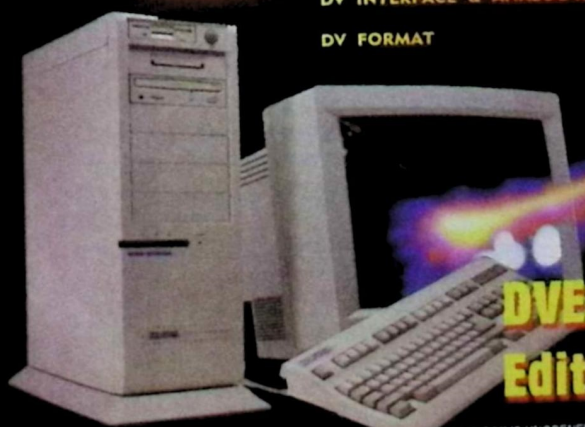

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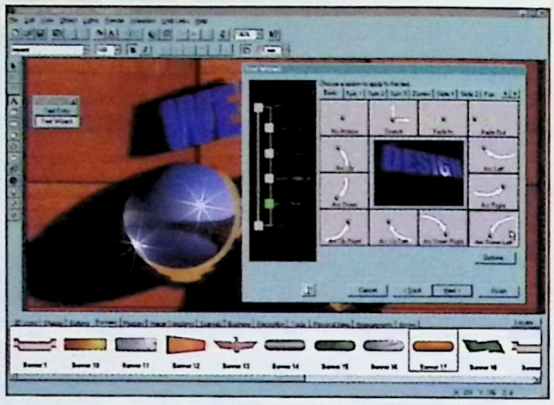
Circle 6 Web # 241

COSMO PAGEFX TAKES DEVELOPERS

Step-by-Step Through the Creative Process

Cosmo PageFX, a 2D/3D Web authoring tool from Cosmo Software, enables designers to add multidimensional, interactive effects to their Web pages using VRML 2.0's vector-based file format. Some of the effects, including 3D typography, animation, and sound, can be as small as 10K, the company said.



The software is in public beta and will ship in early June with a list price of $329.

Cosmo Software also released a Windows version of Cosmo Worlds 2.0. The software for professional content creators has applications in 3D ad banners, online storefronts, immersive entertainment titles, and data visualization and training, according to the company.

Cosmo Worlds 2.0 supports VRML 2.0 and comes with a plug-in development kit, which allows users to customize texture editors, modeling tools, and other behaviors, and an outline editor, which can be used to directly edit VRML 2.0 source code. The list price is $999.

Contact Cosmo Software, 2011 N. Shoreline Blvd., Mountain View, CA 94043, (888) 912-6766, http://cosmo.sgi.com.

Circle 6 Web #195

New Service Eases File Transfer Woes

Targets Prepress Arena

docSpace Direct is a service geared to the time-sensitive, graphics-intensive print and design community. The digital courier service, offered by Intrasect Technologies, offers secure "many-to-one" delivery of electronic files over the Web using nothing but a browser.

Access is through the docSpace Direct "Hot" button on a recipient's Web site. After the file is sent, a confirmation page with a unique job ticket is generated. Recipients are automatically notified of the delivery and can download the file at their convenience, after user name and password authentication. Files are encrypted during transmission.

Advantages over email and FTP include file integrity regardless of size or format, ease of use, scalability, and no extra software requirements.

Contact Intrasect Technologies, Inc., 21 St. Clair Ave. E., Ste. 1400, Toronto, Ontario, Canada M4T 2T7, (416) 410-9373, www.intrasect.com.

Circle 6 Web #194

WEB DESIGN EFFECTS MARKS INTEL CORP.'S

First-Ever Multimedia App

Intel has shipped its premiere multimedia-creation application, Web Design Effects. The tool enables developers to produce animated effects, including running water, floating clouds, and smoky flames in single bitmap images with quick downloading times, according to the company. Intel has also released the Indeo Media Kit, a software package that provides proprietary "progressive download" technology to speed delivery of high-quality Web content by enabling the viewer to select between previewing the file transfer or downloading the image at a later time, the company said.

Web Design Effects and Indeo Media Kit have list prices of $149 each and require a 90MHz Pentium with 16MB RAM running Windows 95/NT.

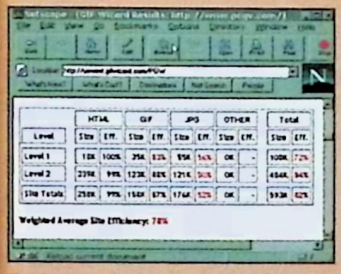
Contact Intel Corp., 2111 N.E. 25th Ave., Hillsboro, OR 97124, (503) 696-8080, www.intel.com/product/multimedia.

Circle 6 Web #193

Web Worx

CONTINUED

The ZyGraphics service has a few drawbacks. One is that if you are trying to match a Web color-safe background other than white or black, the color grids alone make that difficult. Being able to see the hexadecimal and/or RGB equivalents would make this process much easier. Another problem is speed; at 28.8k I found it unreasonably slow in the middle of the day. Still, it's interesting to try, and especially useful for making animated text banners if you want to do it quickly. I found the animated banner file sizes to be reasonable if you select the "smallest file" option.



Here's a sample survey on the graphics efficiency of a site. Graphics below 90 percent efficiency will benefit from optimization.

GIF Wizard (www.gifwizard.com) is a nifty service that can help you attain the fastest loading time for your Web pages. Start out with the free Site Survey. Type in your site's URL and GIF Wizard will survey your site's HTML, GIF, and JPEG files for efficiency (first and second levels only). It returns a report so you can determine the overall shape your graphics are in; if you have a score of less than 90 percent, you might want to consider optimizing your graphics.

The Site Survey gives you an overall picture but you also can subscribe to GIF Wizard to obtain ongoing graphics and page optimizing services. The Single User Graphics Designer package ($99 per year) allows you to compress all the images on your Web site and/or upload and compress images on your hard disk. The Webmaster package ($399 per year) adds in the SiteScan feature, which automatically locates non-optimal images on your site as well as broken links.

Sandy Lurins is a Web designer based in Eugene, OR. She can be reached at slurins@rio.com.

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- 13 ◯ 130 Other (please specify)_____

2. What is your primary job function? (Fill in ONE only)

- 14 ◯ 15 Information Systems (IS) Management
- 15 ◯ 25 Corporate Management/Sales
- 16 ◯ 35 Multimedia/Video Producer
- 17 ◯ 45 Designer/Graphic Artist/Art Director
- 18 ◯ 55 Technical Designer/Architect
- 19 ◯ 65 Hardware/Software Engineer
- 20 ◯ 75 Trainer/Educator
- 21 ◯ 85 Training Management
- 22 ◯ 95 Other (please specify)_____

3. Are you involved in your organization's purchasing process for computer graphics-related hardware and/or software? 23 ◯ Y Yes 24 ◯ N No

4. What are your primary applications for computer graphics? (Fill in ALL that apply)

- 0001 ◯ Multimedia Communications
- 0002 ◯ Business Presentations
- 0003 ◯ Creative Arts
- 0004 ◯ Color Electronic Publishing
- 0005 ◯ Video Production
- 0006 ◯ Other (please specify)_____

5. Which of the following computer graphics/video products are you involved in purchasing? (Fill in ALL that apply)

Currently Use	Plan to Purchase		Currently Use	Plan to Purchase	
25 ◯ 21	34 ◯ 21	Color Monitors	43 ◯ 30	53 ◯ 30	Video Capture Cards
26 ◯ 22	35 ◯ 22	Graphic Tablets	44 ◯ 31	54 ◯ 31	Mass Storage
27 ◯ 23	36 ◯ 23	Fax/Modem	45 ◯ 32	55 ◯ 32	Film Recorders
28 ◯ 24	37 ◯ 24	CD-ROM Drive	46 ◯ 33	56 ◯ 33	Windows NT
29 ◯ 25	38 ◯ 25	Scanners	47 ◯ 34	57 ◯ 34	Windows '95
30 ◯ 26	39 ◯ 26	Sound Cards	48 ◯ 35	58 ◯ 35	Color Printers/Copiers
31 ◯ 27	40 ◯ 27	15-Bit/16-Bit Color Graphics Boards	49 ◯ 36	59 ◯ 36	TV Boards
32 ◯ 28	41 ◯ 28	24-Bit Color Graphics Boards	50 ◯ 37	60 ◯ 37	Digital Camera
33 ◯ 29	42 ◯ 29	32-Bit Color Graphics Boards	51 ◯ 38	61 ◯ 38	Video Equipment/Camcorder
			52 ◯ 39	62 ◯ 39	Other (please specify)_____

6. Which of the following types of software are you involved in purchasing? (Fill in ALL that apply)

Currently Use	Plan to Purchase		Currently Use	Plan to Purchase	
63 ◯ 0001	67 ◯ 0001	Paint/Image Editing	71 ◯ 0005	75 ◯ 0005	Animation
64 ◯ 0002	68 ◯ 0002	Presentation	72 ◯ 0006	76 ◯ 0006	Multimedia Authoring
65 ◯ 0003	69 ◯ 0003	Publishing	73 ◯ 0007	77 ◯ 0007	Video Editing
66 ◯ 0004	70 ◯ 0004	Sound/Music	74 ◯ 0008	78 ◯ 0008	Other (please specify)_____

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75 ○ Trainer/Educator
85 ○ Training Management
95 ○ Other *(please specify)* _____

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0005 ○ Video Production
0006 ○ Other *(please specify)* _____

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24 ○	24 ○	CD-ROM Drive	33 ○	33 ○	Windows NT
25 ○	25 ○	Scanners	34 ○	34 ○	Windows '95
26 ○	26 ○	Sound Cards	35 ○	35 ○	Color Printers/Copiers
27 ○	27 ○	15-Bit/16-Bit Color Graphics Boards	36 ○	36 ○	TV Boards
28 ○	28 ○	24-Bit Color Graphics Boards	37 ○	37 ○	Digital Camera
29 ○	29 ○	32-Bit Color Graphics Boards	38 ○	38 ○	Video Equipment/Camcorder
			39 ○	39 ○	Other *(please specify)* _____

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0002 ○	0002 ○	Presentation	0006 ○	0006 ○	Multimedia Authoring
0003 ○	0003 ○	Publishing	0007 ○	0007 ○	Video Editing
0004 ○	0004 ○	Sound/Music	0008 ○	0008 ○	Other *(please specify)* _____

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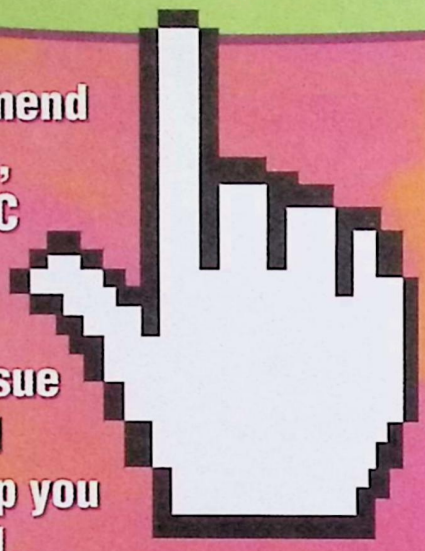

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VIEWSONIC PROJECTOR
PJ1000 Office Theater is Released

ViewSonic Corp. has released the PJ1000 Office Theater projector, an LCD projector that outputs 600 ANSI lumens with a contrast ratio of 200:1. It features a three-panel active-matrix display that outputs 1280 x 1024 compressed XGA or expanded VGA resolution, as well as 800 x 600 resolutions. For sound output, the projector uses bezel integrated 2-watt speakers. It supports a range of display and video standards, including NTSC, PAL, SECAM, and S-Video. It is priced at $8,995. Contact ViewSonic Corp., 381 Brea Canyon Rd., Walnut, CA 91789, (800) 888-8583, www.viewsonic.com.

Circle 6 Web #176

Painter Classic Ships
Mimics Traditional Media Like the Pros

MetaCreations Corp. has released Painter Classic, a paint program that mimics traditional media like chalk, paint, and brush strokes.

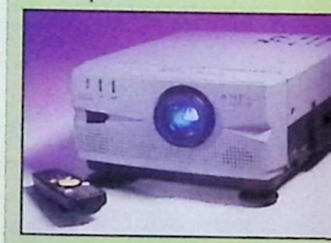
It features a simplified interface, an extensive brush library that gives you a variety of brush strokes for a custom look, and a host of Natural Media tools that are derived from the professional Painter application.

System requirements are a 486DX or faster, Windows 95 or NT, 16MB RAM (32MB for NT), CD-ROM drive, and SVGA video. It is priced at $99. Contact MetaCreations Corp., P.O. Box 66959, Scotts Valley, CA 95067, (408) 430-4000, www.metacreations.com.

Circle 6 Web #177

AmPro Ships LCD Projector With 750 ANSI Lumens

AmPro Corp. has released the LCD-160, a compact video projector that offers 750 ANSI lumens using 2.3 million active pixels.



The LCD-160's features include built-in power focus and zoom, as well as volume, input, and picture controls—all accessible via an IR remote mouse with laser pointer. It also features an electronic magnification option for zooming into small sections of the screen.

The projector displays NTSC, PAL, and SECAM video sources in 1024 x 768 video resolution. It comes with the infrared remote control, mouse cable, an air filter, and a VGA-to-VGA cable. The LCD-160 is priced at $10,495. Contact AmPro Corp., 5 Wheeling Ave., Wolburn, MA 01801, (781) 932-4800, www.amprocorp.com.

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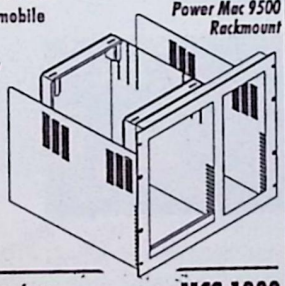

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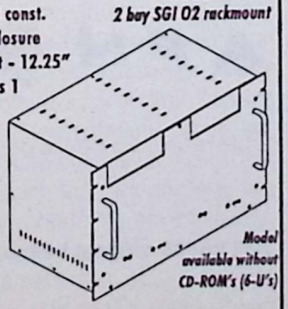

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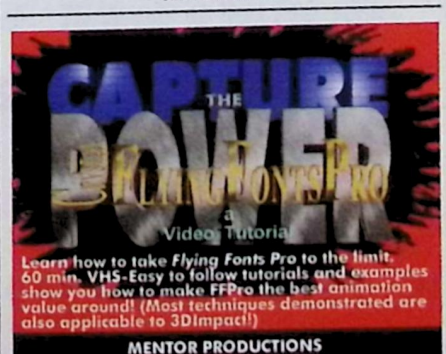

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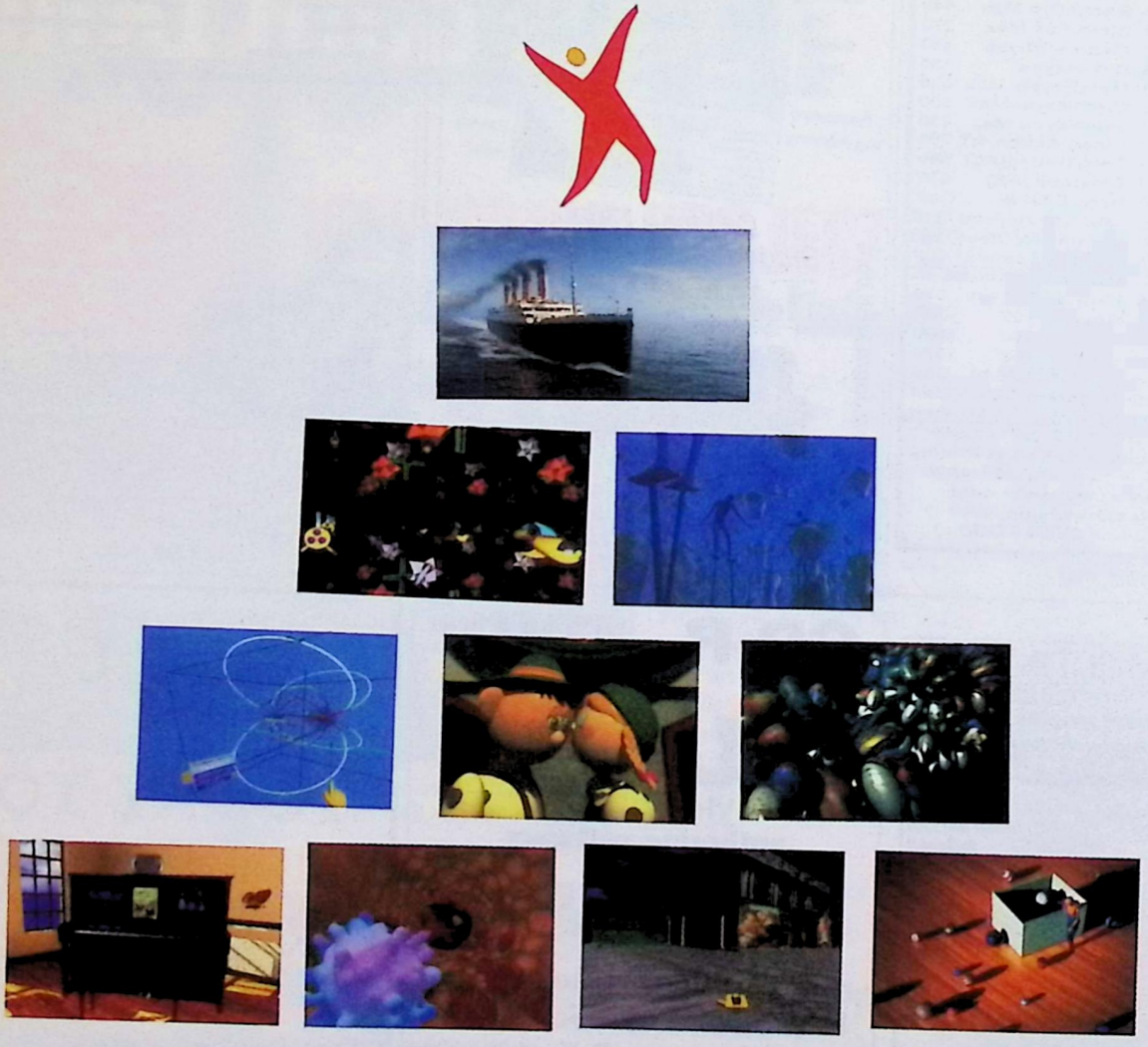

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VRML Tool for Novice Designers

World Visions, a [illegible]-based, VRML-compatible [illegible]tool, has shipped from Aesthetic [illegible]ions. The software targets Web developers with little or no programming experience by offering them a library of ready-made components that can be used to build VR applications such as Web banners and interactive demonstrations. Windows-like toolbars feature drop-down menus that enable you to point and click and drag and drop objects to create VR environments. System requirements are Windows 95/NT, 16MB RAM, and 20MB hard disk space.

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Circle 6 Web # 200

The Web is a great medium for sharing information, but it also has a great potential for cannibalizing the very thing it consists of.

J. V. Bolkan

The New Pirates

A lack of respect for intellectual rights, ignorance of copyright laws, and general confusion over what is acceptable use is becoming the norm on the Web. As soon as a really cool Web site appears, there are dozens of other sites cannibalizing its information. There always has been a hacker underground that not only accepted the piracy of intellectual property, but actually encouraged it under the slogan, "Information wants to be free." That belief wasn't a major problem when the information was difficult to steal and even more difficult to share.

Today's digital environment is much different, and intellectual property rights are under siege.

Part of the problem is the ease of publishing on the Web. In the past, to be a publisher required a significant investment. Few people would risk that investment without studying the industry. Journalism classes focus as much, if not more, on the law and fair usage as they do on the mechanics of creation. Obviously, some trained journalists are among the guilty, but at least they know what they are doing is wrong.

Few people seem to recognize that "borrowing" an image from a site is a criminal act.

If it was just a few who were willfully breaking the law, the problem would be annoying, but as the Web matures, tolerance would surely diminish.

Don't expect the courts to make a statement. Efforts to enforce intellectual rights are hampered by the nature of the Internet.

Individuals or very small businesses run the vast majority of illegal sites—not exactly the type of target that makes a good defendant in a lawsuit.

Thousands of Web sites exist with absolutely no profit motive attached. Many of these sites are in direct competition with commercial sites. Perhaps the most prominent example would be all the "Star Trek" sites and Paramount Pictures' site. Imagine the shudders of fear among the PR folks at any large corporation whenever the legal department suggests suing some 13-year-old kid over copyright infringement. The public relations cause is almost hopeless if the kid's site is a typical not-for-profit fan site.

Are the thousands of free fan sites stealing money directly from companies such as Paramount? In most cases, no—they simply exist as a hobby. But are they infringing on these company's rightful copyrights and doing them economic harm? Certainly. Why would you pay for name-brand screen savers if you can get bootlegged ones for free? More subtle losses come from the loss of traffic at these company's Web sites. A company has the right to leverage a product's popularity to promote its other products.

• • •

Efforts to enforce intellectual rights are hampered by the nature of the Internet.

•

Of course, it isn't just large corporations that are getting ripped off on the Internet.

Thousands of individuals and small businesses have invested significant time and effort into creating custom Web sites and content only to find their impact minimized when the pirates adopt their work as this week's design fad.

The Web is a great medium for sharing information, but it also has a great potential for cannibalizing itself. The software industry faced a similar pirating crisis, and although it still must fight the battle, it raised awareness and established guidelines.

The software industry's campaign against software piracy could serve as a model. Rather than prosecute everyone in sight, the industry picked visible cases to prosecute. More important, it launched a huge educational campaign to let people know that copying software is a crime.

Web creators have already demonstrated that they can be an effective lobby. The anti-censorship campaign, with all those black backgrounds may not have defeated government restrictions by themselves, but they surely helped. Perhaps the answer for Web piracy is a similar grassroots campaign. Whatever the solution, the online community must do something soon, or it simply won't pay to have talent. PCGV

Senior contributing editor J. V. Bolkan runs Bolkan-Nelson Media Services with his wife, Sharleen Nelson, from their base in Springfield, OR. He can be reached online at jvbolkan@aol.com.

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